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Performance Evaluation of the Aerated Lagoon System at North Gulfport, Mississippi

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Performance Evaluation of the Aerated Lagoon System at North Gulfport, Mississippi

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16. ABSTRACT

This report from the Department of Environmental Health Sciences of Tulane University presents the data collected over a one-year monitoring period at the Orange Grove Lagoon System located in Gulfport, Mississippi.

Results indicate that during the study period the treatment system did not exceed the federal biochemical oxygen demand average monthly requirement of 30 mg/l nor the seven consecutive day limit of 45 mg/l. The stringent permit level of 15 mg/l set by the Mississippi Air and Water Pollution Control Commission, however, was exceeded in all cases. A yearly average of 30.7 mg/l of Total Suspended Solids was recorded. The system never exceeded federal or state pH criteria. Fecal coliform standards of 200 colonies/100 ml were met only during the months of January and February. Non-compliance was due to low residual chlorine levels resulting from poor design and operational control. Other parameters were monitored, summarized, and discussed.

From the results, well designed and operated multi-celled aerated lagoons in similar climates should be capable of meeting the Federal Secondary Treatment Standards. Additional polishing may be required if there are more stringent limitations imposed for discharge into water quality limited receiving waters.

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PERFORMANCE EVALUATION OF THE AERATED LAGOON SYSTEM AT NORTH GULFPORT, MISSISSIPPI

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FOREWORD

The Environmental Protection Agency was created because of increasing public and government concern about the dangers of pollution to the health and welfare of the American people. The complexity of the environment and the interplay between its components require a concentrated and integrated attack on the problem.

Research and development is that necessary first step in problem solution and it involves defining the problem, measuring its impact, and searching for solutions. The Municipal Environmental Research Laboratory develops new and improved technology and systems for the prevention, treatment, and management of wastewater and solid and hazardous waste pollutant discharges from municipal and community sources, for the preservation and treatment of public drinking water supplies, and to minimize the adverse economic, social, health, and aesthetic effects of pollution. This publication is one of the products of that research; a most vital communications link between the researcher and the user community.

As part of these activities, this comprehensive performance evaluation of a two-cell municipal aerated lagoon wastewater treatment system was conducted to determine capabilities of this treatment mode in complying with Federal Secondary Treatment requirements.

Francis T. Mayo, Director
Municipal Environmental Research
Laboratory

ABSTRACT

Municipal aerated wastewater treatment lagoons are extensively employed throughout the United States today. Reliable long-term performance and operational data to evaluate capabilities with respect to Federal Secondary Treatment Standards, however, are generally lacking. This report presents the data collected over a one-year monitoring period at the Orange Grove Lagoon System located in Gulfport, Mississippi.

Results indicate that during the study period, the treatment system did not exceed the federal biochemical oxygen demand average monthly requirement of 30 mg/l nor the seven consecutive day limit of 45 mg/l. The stringent permit level of 15 mg/l set by the Mississippi Air and Water Pollution Control Commission, however, was exceeded in all cases. Performance with respect to federal and state suspended solids criteria was marginal. A yearly average of 30.7 mg/l TSS was reported with secondary treatment quality being exceeded three of the twelve months monitored. The system never exceeded federal or state pH criteria. Fecal coliform standards of 200 colonies/100 ml were met only during the months of January and February. Non-compliance was due to low residual chlorine levels resulting from poor design and operational control.

In addition to the parameters for which Federal Standards have been established, many others were monitored, summarized and discussed. As a result of this study, well-designed and operated, multi-celled aerated lagoons located in climates similar to those of the Gulf Coast should be capable of meeting Federal Secondary Treatment Standards. If more stringent limitations are required due to discharge into water quality limited segments additional polishing of effluent or a different treatment mode may be required.

This report was submitted in fulfillment of Grant No. R803899 by Tulane University under the partial sponsorship of the U.S. Environmental Protection Agency.

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LIST OF ABBREVIATIONS

ac	- acre
Alk	- alkalinity as $CaCO_3$
BOD_5	- five day biochemical oxygen demand
cm	- centimeters
^oC	- centrigrade
COD	- chemical oxygen demand
m^3/day	- cubic meters per day
DO	- dissolved oxygen concentration
FC	- fecal coliform bacteria
gal	- gallon
ha	- hectare
kg	- kilogram
kg/ha·d	- kilograms per hectare per day
l	- liter
mg	- milligram
mg/l	- milligram per liter
ml	- milliliter
MGD	- million gallons per day
NH_3-N	- ammonia-nitrogen
NO_2-N	- nitrite-nitrogen
NO_3-N	- nitrate-nitrogen
SCOD	- soluble chemical oxygen demand
$SBOD_5$	- soluble five day biochemical oxygen demand
TKN	- total Kjeldahl nitrogen
TP	- total phosphorus
TSS	- total suspended solids
VSS	- volatile suspended solids

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SECTION 1

INTRODUCTION

NATURE OF THE PROBLEM

The Federal Water Pollution Control Act Amendments of 1972 established the minimum performance requirements for publicly-owned wastewater treatment facilities. By July, 1977 these treatment works should have complied with effluent limitations based on secondary treatment as defined by the Environmental Protection Agency and as published in the Federal Register. The original imposed regulations state: a) the five-day biochemical oxygen demand (BOD_5) and suspended solids (SS) shall not exceed an arithmetic mean value of 30 mg/l for effluent samples collected over a period of 30 consecutive days nor 45 mg/l for samples collected over seven consecutive days; b) the arithmetic mean of the effluent BOD_5 and SS values determined on samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the BOD_5 and SS values determined on influent samples collected at approximately the same time during the same period; and c) the geometric mean of the fecal coliform bacteria in the effluent shall not exceed 200 per 100 milliliters for samples collected over a period of 30 consecutive days nor 400 per 100 milliliters for samples collected during a period of seven consecutive days.

It should be noted that this definition of secondary treatment for municipal waste treatment facilities has been and is being modified. The Federal Register Vol. 41, No. 144, Monday, July 26, 1976, for example, contains proposed changes pertaining to deletion of fecal coliform criteria and pH restrictions. The Federal Register Vol. 42, No. 195, Friday, October 7, 1977, contains changes in the effluent suspended solids limitations for small municipal lagoons (less than 2 MGD).

Because of inherent advantages of lagoon waste treatment systems, more than 4,000 publicly-owned facilities are in operation throughout the United States. Generally, lagoon treatment provides a relatively simple, inexpensive method of wastewater disposal where land costs are low. Consequently, most lagoon systems are located in rural communities where typically little, if any, performance evaluations are conducted. An Environmental Protection Agency (EPA) Task Force Committee, while recently preparing a technical bulletin of design criteria for waste treatment lagoons, uncovered very little evidence of performance evaluation with respect to design. Data obtained appeared to indicate that continuous-discharge facultative lagoons will not conform to secondary treatment requirements without upgrading, due to algal cell content during summer and icing conditions during winter.

It is anticipated that effluent quality from lagoon systems can be improved by the utilization of a mechanical oxygen supply in one or several of the cells. It is, therefore, important to determine how effectively, well-designed series operated aerated waste treatment lagoons perform throughout all seasons of the year in various climatic regions. Collection and evaluation of carefully collected operating and performance data should provide evidence as to whether existing continuous-discharge series operated aerated lagoons can, as presently designed and operated, meet proposed standards. Insight should also be provided as to how design and operational upgrading can effectively be accomplished and how lagoon system design can be optimized.

OBJECTIVES

General Objectives

The primary objective of this investigation is to generate reliable year-round performance and operational data for the Orange Grove Utilities municipal waste treatment lagoon system. The lagoons are located in North Gulfport, Mississippi and consist of two aerated lagoons in series followed by chlorination and final settling.

A secondary objective is to evaluate performance efficiency with respect to actual design criteria and the 1977 Secondary Treatment Standards as established by the Federal Water Pollution Control Act Amendments. Results of data analysis will be of assistance to design engineers and regulatory officials and to EPA in attaining its stated objective of defining performance capabilities of surface aerated lagoons located in the deep south.

Specific Objectives

To accomplish the above general objectives, the following specific objectives were fulfilled:

1. Monitor water quality of: a) lagoon influent, b) between cells-in-series, and c) lagoon effluent preceding and following chlorination over a 12 month period. A sampling frequency of 30 consecutive days, four times during the year (once during each season) and 7 consecutive days, once a month during the other 8 months of data collection was maintained.

2. Analyze performance parameters including: wastewater flow, pH, temperature, dissolved oxygen, alkalinity, total and soluble BOD_5, total suspended solids, volatile suspended solids, algal cell counts, fecal coliform counts, total and soluble COD, total phosphorus, total and soluble Kjeldahl nitrogen (TKN), total and soluble ammonia nitrogen, nitrite nitrogen, and nitrate nitrogen at locations and frequencies noted above.

3. Obtain climatological data (light intensity, air temperature, precipitation, and wind direction and intensity) for the lagoon by on site monitoring.

4. Analyze and evaluate lagoon system performance with respect to (i) criteria employed in system design, (ii) the Water Pollution Control Amendments Act of 1972 (PL 92-500) and (iii) effluent discharge standards established by the State of Mississippi.

5. Determine from data analysis whether all the significant treatment occurs in the first cell or if the second cell is necessary for adequate stabilization.

SECTION 2

CONCLUSIONS

Based on the results of 12 months of monitoring the performance of the Orange Grove Aerated Lagoon System located in Gulfport, Mississippi, the following conclusions can be made:

1. The average influent flow-rate varied from 3,425 m^3/day (0.905 MGD) in July to 2,116 m^3/day (0.559 MGD) in October. The yearly average influent flow-rate was 2,900 m^3/day (0.766 MGD) which exceeded the hydraulic design by 1.53 times. The yearly average per capita hydraulic load to the lagoon system was 0.58 m^3/capita/day (153 gal/capita/day).

2. Based on the average influent flow-rate, the average theoretical detention times of the first aeration basin (A1), the second aeration basin (A2), and the settling cell (S2) were respectively 6.8, 10.3 and 5.0 days. Design detention times were 10.4, 15.8, and 2.5 days for A1, A2, and S2 respectively.

3. The organic strength of the raw wastewater was typical of residential wastewater. An average influent biochemical oxygen demand (BOD_5) of 176 mg/l was reported over the study period. This represented a per capita loading of 0.1 kg BOD_5/capita/day (0.22 lb BOD_5/capita/day). The monthly averages of influent BOD_5 concentration ranged from 133 mg/l to 214 mg/l.

4. The actual organic loadings to cells A1 and A2 were 504 and 117 kg BOD_5/ha·d (450 and 104 lb BOD_5/ac/day) as compared to the design loadings of 374 and 86 kg BOD_5/ha·d (334 and 77 lb BOD_5/ac/day) respectively. Hence, the system was organically overloaded during the study period.

5. Overall total BOD_5 removal averaged 85.8% through the lagoons system with an average effluent BOD of 25 mg/l. Secondary criteria of 30 mg/l (30 day monitoring) and 45 mg/l (7 consecutive day limit) was met for all months. The stringent permit level of 15 mg/l set by the Mississippi Air and Water Pollution Control Commission owing to discharge into a water quality limited segment, however, was exceeded in all cases.

6. Yearly average effluent BOD_5 from the aeration system was 50 mg/l which represents a 71.6% reduction. Hence, the final settling cell was necessary for compliance with secondary standards.

7. The monthly averages of effluent soluble BOD_5 concentrations for the lagoon system varied from 10 mg/l (February) to 22 mg/l (October), with a yearly mean of 15 mg/l. If total removal of effluent solids were possible, then state discharge limitations of 15 mg/l could be attained. Total influent BOD_5 reductions from A1, A2, and S2 were accumulatively 79.3%, 84.4%, and 91.7%. Approximately 44% of the raw wastewater total BOD_5 was soluble.

8. While most of the BOD_5 was removed in cell A1, the second cell in series provided additional polishing with reserve capacity to handle severe influent organic variation.

9. Chemical oxygen demand (COD) removal performance of the Orange Grove Lagoon System was similar to BOD_5 reduction trends. Monthly averages of final effluent concentrations ranged from 51 mg/l in July to 89 mg/l in November, with a yearly mean level of 66 mg/l. Approximately 62% of the influent COD was removed by the treatment system.

10. Soluble COD removal paralleled that of total COD reduction. Residual effluent soluble COD ranged from 32 to 56 mg/l with a mean level of 40 mg/l. With complete effluent solids separation, 88% of the raw wastewater COD would be stabilized. About 31% of the raw wastewater total COD was soluble.

11. The raw wastewater influent suspended solids (TSS) level was typical of domestic wastewater. Monthly averages of influent suspended solids concentrations ranged from 117 mg/l in October to 291 mg/l in January with a yearly average of 194 mg/l.

12. Final effluent monthly averages of suspended solids concentration varied from 16 mg/l in October to 50 mg/l during February. A yearly average of 31 mg/l TSS was reported which is near the regulatory limit of 30 mg/l. Sampling results for the 30 day monitoring periods were 32 mg/l (January), 34 mg/l (April), 27 mg/l (July), and 19 mg/l (September). Only during the month of February was the 45 mg/l seven day average value exceeded.

13. Effluent solids from the settling pond were primarily algae cells. Algae growth following chlorination was enhanced due to the relatively long retention in cell S2 of 5 days. Effluent BOD_5 associated with the solids content was approximately 0.33 mg BOD_5/mg TSS.

14. Volatile suspended solids (VSS) results were similar to suspended solids removal trends. Both influent and effluent TSS exhibited a 70% volatile content. System volatile solids reduction averaged 84.2% with about 73% being removed in the first cell. Data indicates effluent BOD_5 associated with the volatile suspended solids as approximately 0.5 mg BOD_5/mg VSS.

15. The aerated lagoon system was effective in the removal or conversion of ammonia nitrogen (NH_3-N). A yearly average reduction of 63% with a mean residual of 5.5 mg/l was reported. During the summer total NH_3-N removal averaged 79% with a mean residual of 2.7 mg/l. The soluble NH_3-N content represented approximately 92% of the total NH_3-N concentration at all sampling locations.

16. Reduction trends of total Kjeldahl Nitrogen (TKN) followed those for ammonia nitrogen. A yearly overall system reduction of 62.4% was observed with an average residual of 9.8 mg/l. Effluent TKN concentrations ranged from 5.8 mg/l in March to 13.2 mg/l during October. Effluent limitations as imposed by the Mississippi Air and Water Pollution Control Commission limit TKN levels to 6.0 mg/l with a maximum of 12.0 mg/l. The system violated the average criteria eleven of the twelve months studied. The soluble fraction accounted for approximately 73-83% of the TKN.

17. The average monthly level of nitrite from the aeration ponds ranged from 0.04 mg/l (November) to 1.73 mg/l (February) with a yearly mean of 0.61 mg/l. The average monthly concentration of nitrate ranged from 0.12 mg/l (September) to 6.50 mg/l (March) with a yearly mean of 2.36 mg/l. Nitrification, however, was inhibited during the period July through November due to low oxygen content (≤ 2 mg/l).

18. Significant removal of the total phosphorous (TP) was not observed during the study period. Approximately 15.4% of the TP was removed within the aeration cells with a total system removal of 30.8%. The yearly mean effluent level was 7.5 mg/l with average monthly ranges of 6.1 mg/l (December) to 10.0 mg/l (November).

19. Federal and state fecal coliform standards of 200 colonies/100 ml were met only during the months of January and February. Noncompliance was due to the low residual chlorine levels maintained. Chlorination was effected prior to the final settling basin with a 5 day retention. A more efficient chlorination chamber and reduced retention in cell S2 along with better operational control should result in compliance to standards.

20. Mean algae cell concentrations for A1, A2, and S2 were 155,600, 220,600, and 119,000 cells/ml respectively. The lower levels found in the effluent are due in part to chlorination prior to the final settling basin. No apparent seasonal trends were noted.

21. Mean yearly alkalinity concentrations indicated a decrease with increased treatment. Average concentrations were 139 mg/l, 116 mg/l, 100 mg/l, and 97 mg/l as $CaCO_3$ for raw influent, A1 effluent, A2 effluent, and S2 effluent respectively. An overall average system alkalinity reduction of 30% was reported.

22. Measurements of temperature, pH, and dissolved oxygen (DO) were obtained on grab samples in situ and therefore represent instantaneous values which depend on the time of day the analyses were performed.

The value of effluent pH ranged from 6.8-7.5 during the study which falls within the secondary treatment criteria of 6.5 to 9.0 and state limits of 6.0 to 7.8.

23. Seasonal variation in performance for most of the parameters monitored was insignificant due to the mild climatic conditions characteristic of the deep South.

24. For climates similar to those of the Gulf Coast, well-designed and operated, multi-celled aerated lagoons appear capable of providing small municipalities with a treatment method able to comply with Federal Secondary Treatment Standards. If more stringent limitations are required due to discharge into water quality limited segments additional polishing of effluent or a different treatment mode may be required.

SECTION 3

RECOMMENDATIONS

Based on the results of 12 months of intense monitoring of the Orange Grove aerated lagoon facility, the following recommendations are proposed:

1. Secondary treatment standards were consistently exceeded with respect to fecal coliform content. It is recommended that a study be made to determine the most effective chlorination procedure. The relative impact of chlorination prior to and following the settling cell should be assessed as well as the effect of detention time on regrowth.

2. Suspended solids compliance with standards was marginal. The effect of the settling cell detention time on solids removal and algae growth should be investigated.

3. A performance comparison between second cell aeration versus no aeration should be made. A second cell (or cells) acting as a stabilization pond(s) may reduce energy consumption and improve overall treatment.

4. Additional research into simple, cost effective removal of algae cells from lagoon effluent should be conducted.

5. Operational procedures to optimize aerated lagoon system performance should be developed.

SECTION 4

ORANGE GROVE UTILITIES AEROBIC LAGOON SITE DESCRIPTION

The lagoon system studied is owned by Orange Grove Utilities and is located in Harrison County, Mississippi approximately eight miles north of Gulfport. The municipal treatment system services a community consisting of residential homes, shopping centers, etc. from a population of approximately 5,000. The continuous-flow lagoons have been in operation for approximately twelve years. The system was originally designed as multi-celled stabilization lagoons operated in series. Eight years ago the first cell was upgraded to an aerated lagoon. During July, 1975 a change in operation of the lagoon system from a series to parallel flow arrangement was implemented. Additionally, floating aerators were added to the second lagoon and each of the two aerated lagoons was followed by less than a twenty-four hour retention settling basin. The operational change was instituted as an upgrading procedure to meet state requirements when additional house connections were made to the sewer system. During October 1975, prior to the initiation of this study the flow configuration was reverted back to series operation for subsequent testing and evaluation.

A schematic of the existing lagoon system is presented in Figure 1. A brief description of the lagoon system follows:

1. CELL A1---AERATED FACULTATIVE LAGOON

   a. Size: 63 m X 163 m (206 ft X 535 ft)
   b. Area: 1.0 ha (2.5 acres)
   c. Depth: 1.9 m (6.3 ft)
   d. Volume: 19,682 m^3 (5.2 MG)
   e. Flow: 1892 m^3/day (500,000 GPD) design
   f. Detention time: 10 days (design)
   g. Hydraulic loading: 185 mm/day (7.3 in/day) design
   h. Organic loading: 374 kg/ha·d (334 lbs BOD_5/ac/day) design
   i. Flow pattern: plug flow
   j. Aeration equipment: 8 Welles surface aerators 3.73 kw/aerator (5 hp/aerator)
   k. Power level: 1.5×10^{-3} kw/m^3 (7.7 hp/MG)
   l. Dikes: unlined with 3:1 slopes
   m. Flow measurement: Martig BHB 1 unit with a 38 cm (15 in) sensing ring calibrated to a Bristal G500 recorder
   n. Inlet: two 25 cm (10 in) diameter C.I. pipes (parallel - 0.61 m) extending 10.7 m (35 ft) into the lagoon (above water)

2. CELL A2---AERATED FACULTATIVE LAGOON

a. Size: 124 m X 126 m (407 ft X 412 ft)
b. Area: 1.5 ha (3.8 acres)
c. Depth: 1.9 m (6.3 ft)
d. Volume: 29,902 m^3 (7.9 MG)
e. Flow: 1892 m^3/day (500,000 GPD) design
f. Detention time: 15.8 days (design)
g. Hydraulic loading: 121 mm/day (4.8 in/day) design
h. Organic loading: 86 kg/ha·d (77 lb BOD_5/ac/day) design
i. Flow pattern: plug flow
j. Aeration equipment: 9 Welles surface aerators 5.59 kw/aerator (7.5 hp/aerator)
k. Power level: 1.67 X 10^{-3} kw/m^3 (8.5 hp/MG)

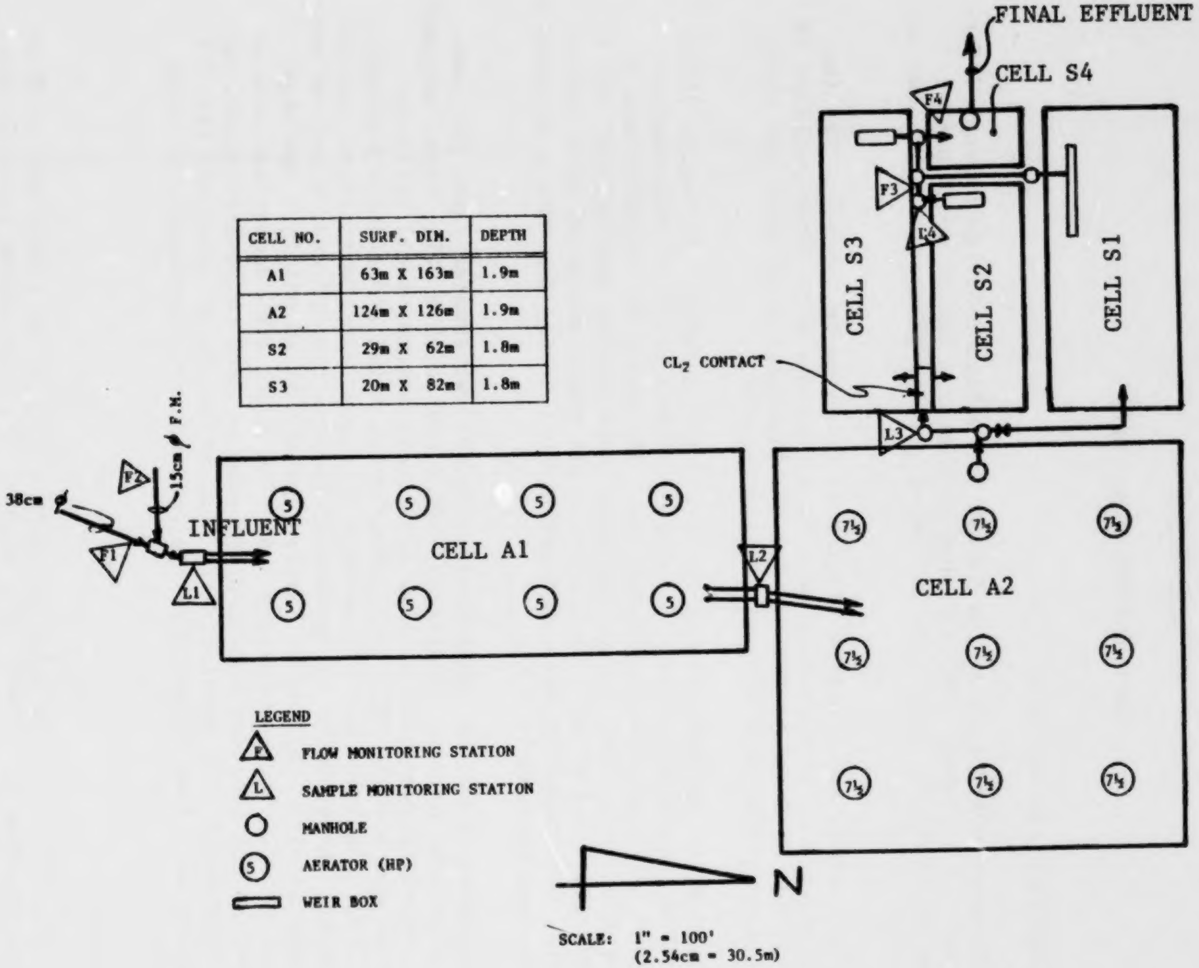
3. CHLORINATION

a. Chlorinated prior to discharge into settling Cell S2
b. Chlorination equipment: auto switch over type 45 kg/d·meter (100 lb/d meter)

4. CELL S2---SETTLING BASIN

a. Size: 29 m X 63 m (95 ft X 205 ft)
b. Area: 1809 m^2 (19,475 ft^2)
c. Depth: 1.8 m (6.0 ft)
d. Volume: 3293 m^3 (0.87 MG)
e. Flow: 1324 m^3/day (350,000 GPD) design
f. Detention time: 2.5 days (design)
g. Dikes: unlined with 3:1 slopes

As shown in Figure 1, overall system performance was based on the quality of effluent from Cell S2 and hence Cells S1, S3, and S4 were not included in the study evaluation.



CELL NO.	SURF. DIM.	DEPTH
A1	63m X 163m	1.9m
A2	124m X 126m	1.9m
S2	29m X 62m	1.8m
S3	20m X 82m	1.8m

Figure 1. Aerated Lagoon Flow Plan.

SECTION 5

EXPERIMENTAL PROCEDURES

SAMPLE COLLECTION AND ANALYSIS

Performance monitoring of the Orange Grove Lagoon System commenced during the month of December, 1975 and continued over a twelve month period. Monitoring locations for both flow and water quality parameters are shown on Figure 1.

The analytical and sampling program is outlined in Table 1. Testing procedures and sample preservation were in accordance with those outlined in the 13th Edition of Standard Methods for the Examination of Water and Wastewaters[1] or as modified according to EPA techniques[2].

Water quality parameter sampling locations included: 1) lagoon influent, 2) between cells-in-series, 3) lagoon effluent prior to chlorination, and 4) lagoon effluent after sedimentation. The sampling frequency was 30 consecutive days four times during the year (once during each season) and 7 consecutive days, once a month during the other eight months of data collection. Thirty days sampling reflected performance during the months of January, April, July, and September.

Performance parameters monitored included: wastewater flow, pH, temperature, dissolved oxygen, alkalinity, total and soluble BOD_5, total suspended solids, volatile suspended solids, algal cell counts, fecal coliform counts, total and soluble COD, total phosphorus, total and soluble Kjeldahl nitrogen (TKN), total and soluble ammonia nitrogen, nitrite nitrogen, and nitrate nitrogen. Measurement of wastewater temperature, pH, and dissolved oxygen were made in situ. All other samples (except fecal coliform and algal cell counts) were 24 hour composites. An ISCO Model 1680 sequential sampler was employed at the influent location and samples were composited according to flow. ISCO Model 1580 samplers were used at the other locations (L2, L3, L4). Samplers were iced except when the ambient air temperature was below 7.2°C (45°F).

Hydraulic Data

Influent flow (F1) was measured using a Martig BUB 2 unit with a 38 cm (15 in.) sensing ring calibrated to a Bristol G500 continuous recorder (See Figure 1.). After calibration for pumping rate, the lift station was monitored (F2) for on-off times. Effluent from aeration cell A2 was split between three settling cells. Flow rates percentages for cells S1, S2, and S3 were 8.5%, 23.2% and 68.3% MGD respectively. Total system effluent flow was mea-

sured at Station F4. These latter two flows were monitored with 30.5 cm (12 in.) sensing rings and a Martig BUB 3 unit connected to a Bristol G500 recorder. All flow measurements were recorded as depth of flow and converted to gallons per minute prior to sample compositing.

Auxiliary Monitoring Information

Information on electrical usage for the aeration equipment and maintenance time records during the test period was recorded. Pertinent meteorological data such as air temperatures (high, average, and low), light intensity, rainfall, wind velocity and prevailing direction were recorded daily. Air temperatures and wind data were obtained from the nearby Gulfport, Mississippi airport. Rainfall was measured with a conventional rain gauge located on-site. Solar radiation was also monitored on-site using a R401-Mechanical Pyranograph.

TABLE 1. SAMPLING AND ANALYTICAL SCHEDULE

PARAMETER	SAMPLE LOCATION			
	Lagoon Influent (L1)	Between Cells of Lagoon System (L2)	Lagoon Effluent (L3)	After Chlorination and Clarification (L4)
Daily Flow-Total, Min and Peak	x			x
pH	x	x	x	x
Water Temp	x	x	x	x
DO	x	x	x	x
Alkalinity	x	x	x	x
Total BOD_5	x	x	x	x
Soluble BOD_5	x	x	x	x
Total Suspended Solids	x	x	x	x
Volatile Suspended Solids	x	x	x	x
Total COD	x	x	x	x
Soluble COD	x	x	x	x
Total P	x		x	x
TKN (Total & Sol)	x	x	x	x
NH_4^+-N (Total & Sol)	x	x	x	x
NO_2-N			x	
NO_3-N			x	
Algae Cell Count*		x	x	x
Fecal Coliforms			x	x
Chlorine Residual				x

All parameters monitored daily during stated consecutive sampling program.

*Counted one day during the 7 consecutive day sampling periods and three days each a week apart during the 30-day consecutive sampling periods.

SECTION 6

RESULTS

Performance data collected during this investigation are reported on a monthly basis and tabulated in Appendix A. Auxiliary monitoring information including electrical usage and pertinent meteorological information is presented in Appendix B. Results of the study are shown in Tables 2 through 13 where monthly average, median, and range values for performance parameters are listed. These results will be discussed in Section 7. Characteristics of wastewater influent and effluents from the aeration cells and settling basin were monitored at points L1, L2, L3, and L4 respectively (see Figure 1).

TABLE 2. ORANGE GROVE LAGOON PERFORMANCE SUMMARY DECEMBER, 1975 (7 DAYS OF MONITORING)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow (m^3/day x 10^3)	Minimum	1.325	1.215	1.105-1.703	-	-	-	-	-	-	1.260	1.211	1.192-1.419
	Peak	3.452	3.740	3.066-4.580	-	-	-	-	-	-	1.998	1.930	1.711-2.468
	Total	2.790	2.631	2.422-3.539	-	-	-	-	-	-	1.537	1.552	1.340-1.741
Temp (°C)		19.7	20	14-24	12.3	12	11-13	10.7	11	9-12	10.9	11	10-13
pH		-	7.1	6.8-7.2	-	7.1	6.9-7.4	-	7.2	6.9-7.4	-	7.2	6.9-7.4
D.O. (mg/l)		0.3	0.0	0.0-1.8	4.7	4.8	3.9-5.5	9.3	9.6	8.1-9.8	6.6	6.8	5.4-7.4
Alky (mg/l as Ca CO_3)		142	140	110.176	124	123	107-143	98	98	94-104	87	88	82-93
BOD (mg/l)	Total	177	179	124-238	49	50	43-54	53	58	38-65	24	23	20-31
	Soluble	94	95	78-109	32	33	20-47	25	23	16-34	12	11	7-20
COD (mg/l)	Total	510	476	355-766	105	106	93-117	87	89	60-112	88	89	55-120
	Soluble	144	133	129-187	60	63	45-68	42	40	32-60	36	34	28-46
SS (mg/l)	Total	233	211	180-302	38	39	28-47	46	44	34-54	42	45	32-49
	Volatile	176	174	155-196	33	32	26-40	43	47	32-50	39	42	30-47
NH_3 (mg/l)	Total	19.0	19.6	13.2-28.8	11.6	11.4	11.0-12/6	7.6	7.4	7.1-8.3	7.5	7.4	7.1-8.1
	Soluble	17.9	18.2	12.0-25.5	11.2	11.3	10.9-11.4	7.3	7.3	6.5-7.8	7.4	7.2	6.9-7.9
TKN (mg/l)	Total	29.7	29.4	22.7-38.9	19.4	19.4	18.0-20.2	13.1	13.2	12.1-14.11	12.1	11.9	11.1-13.2
	Soluble	26.6	26.0	19.0-36.4	16.1	15.8	15.0-17.4	9.9	9.8	9.2-11.0	9.1	9.1	8.2-10.5
NO_2 (mg/l)		-	-	-	-	-	-	0.37	.25	0.24-0.85	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	1.94	1.93	1.66-2.19	-	-	-
P (mg/l)	Total	7.7	7.0	5.7-10.7	-	-	-	6.3	6.2	5.9-6.9	6.1	6.1	5.8-6.9
Cl_2 residual (mg/l)		-	-	-	-	-	-	-	-	-	0.06	0.0	0.0-0.25
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	12,120*	13,300	6,800-38,000	509*	2,300	10-34,000
Algae cell count (number/ml X 10^3)		-	-	-	8.47**	-	8.47	79.33**	79.33	-	57.08**	57.08	-

* geometric mean
** only one observation

TABLE 3. ORANGE GROVE PERFORMANCE SUMMARY MONTH OF JANUARY 1976 (30 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	2.517	2.362	1.563-3.706	-	-	-	-	-	-	1.154	1.192	0.806-1.340
(m^3/day x 10^3)	Peak	3.702	3.732	2.877-4.235	-	-	-	-	-	-	1.325	1.257	1.181-1.635
	Total	3.259	3.240	2.025-4.201	-	-	-	-	-	-	1.249	1.230	1.003-1.491
Temp (°C)		18.6	19	7-21	13.7	13.5	11-16	12	11.5	10-15	12	11.5	9-15
pH		-	7.1	6.8-7.2	-	7.2	6.8-7.4	-	7.3	6.9-7.4	-	7.2	6.9-7.7
D.O. (mg/l)		1.0	0.3	0.0-3.8	3.9	4.0	2.1-5.4	8.1	8.2	4.8-9.6	6.5	6.4	4.8-8.0
Alky (mg/l as Ca CO_3)		133	124	110-206	121	124	94-132	96	96	85-112	93	93	84-104
BOD (mg/l)	Total	214	203	107-396	59	63	40-94	59	59.5	40-85	26	26	18-38
	Soluble	88	84	34-154	41	40	25-60	31	30	12-49	16	16	6-32
COD (mg/l)	Total	457	426	198-786	96	96	48-134	82	84	48-110	71	72	36-87
	Soluble	120	116	71-208	56	56	36-69	41	39	22-75	38	38	30-58
SS (mg/l)	Total	291	246	72-714	36	36	26-55	43	40	26-70	32	30	23-77
	Volatile	230	205	49-508	33	32	20-53	36	35	24-70	26	24	15-42
NH_3 (mg/l)	Total	16.5	15.4	11.2-28.3	11.5	11.6	6.3-13.4	7.0	6.9	5.3-8.6	7.3	7.7	5.9-8.7.
	Soluble	15.9	14.6	11.2-28.3	11.1	11.5	6.2-12.5	6.8	6.8	5.0-8.5	7.2	7.6	5.8-8.4
TKN (mg/l)	Total	29.0	26.3	17.4-49.3	19.0	19.0	16.8-21.0	13.6	13.4	12.0-15.9	12.5	12.7	11.0-13.3
	Soluble	25.2	22.3	13.7-45.9	11.0	16.0	13.4-18.2	10.4	10.4	7.3-13.3	10.5	10.4	8.6-12.7
NO_2 (mg/l)		-	-	-	-	-	-	0.60	0.58	0.11-0.92	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	2.75	2.52	1.27-6.66	-	-	-
P (mg/l)	Total	8.24	7.36	5.07-13.92	-	-	-	6.94	6.90	5.37-8.88	6.89	6.81	4.42-9.00
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.01	0.0	0.0-0.1
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	187.08*	24,500	1,200-78,000	169*	140	> 10-6,100
Algae cell count (number/ml X 10^3)					63.33	63.33	59.00-69.00	174.33	174.33	143.00-252.00	116.83	117.00	109.00-126.00

* geometric mean

TABLE 4. ORANGE GROVE PERFORMANCE SUMMARY MONTH OF FEBRUARY 1976 (6 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow (m^3/day x 10^3)	Minimum	1.896	1.892	1.491-2.528	-	-	-	-	-	-	0.731	0.734	0.572-0.874
	Peak	2.824	2.566	2.422-3.970	-	-	-	-	-	-	0.961	1.037	0.734-1.037
	Total	2.483	2.396	2.135-2.918	-	-	-	-	-	-	0.967	0.874	0.734-0.874
Temp (°C)		19.4	19.2	19-20	19.2	19	19-20	19.2	19	18-20	18.8	19	18-20
pH		-	7.0	6.6-7.2	-	7.2	7.1	-	6.8	6.4-7.1	-	7.1	6.8-7.3
D.O (mg/l)		1.1	1.2	0.0-1.8	3.0	3.0	2.0-4.2	3.5	3.2	2.6-4.5	2.3	2.5	1.2-3.0
Alky (mg/l as Ca CO_3)		132	132	119-146	129	128	124-135	53	52	47-65	66	66	61-72
BOD (mg/l)	Total	198	205	150-227	68	65	53-91	57	53	45-81	20	19	10-36
	Soluble	84	83	50-117	46	46	36-59	31	30	22-40	10	8	5-20
COD (mg/l)	Total	459	431	220-779	105	103	87-123	90	90	80-102	77	73	65-95
	Soluble	113	116	66-151	55	56	41-66	36	34	29-45	35	33	27-43
SS (mg/l)	Total	184	147	104-382	52	46	38-71	50	52	38-60	50	38	31-115
	Volatile	136	111	92-253	44	42	35-56	44	46	38-48	36	34	28-44
NH_3 (mg/l)	Total	14.0	12.8	12.3-19.9	12.4	12.2	11.9-13.3	0.5	0.32	0.2-1.6	3.1	3.0	2.3-3.9
	Soluble	12.9	12.0	12.0-16.4	12.2	11.9	11.8-13.2	0.5	0.26	0.2-1.6	3.0	3.0	2.3-3.4
TKN (mg/l)	Total	21.0	21.0	17.1-25.2	19.6	19.3	18.8-20.7	6.7	6.5	5.0-8.4	8.2	8.6	5.0-10.1
	Soluble	18.2	16.6	15.3-23.0	15.8	15.7	14.2-18.5	3.4	3.2	2.4-4.8	5.9	6.2	3.7-7.3
NO_2 (mg/l)		-	-	-	-	-	-	1.73	1.73	0.64-2.80	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	5.1	5.3	3.6-6.4	-	-	-
P (mg/l)	Total	9.48	7.7	5.3-19.8				7.9	7.5	5.7-11.3	7.74	7.4	7.2-9.3
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.12	0.1	0.1-0.2
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	7,838 *	7,650	2,300-25,850	122 *	105	30-970
Algae cell count** (number/ml X 10^3)		-	-	-	56.00	56.00	-	149.00	149.00	-	110.00	110.00	-

* geometric mean
** represents only one sampling day

TABLE 5. ORANGE GROVE PERFORMANCE SUMMARY

MONTH OF MARCH 1976 (7 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow (m^3/day x 10^3)	Minimum	1.805	1.847	0.965-2.142	-	-	-	-	-	-	0.526	0.488	0.431-0.734
	Peak	2.509	2.441	2.320-2.918	-	-	-	-	-	-	0.715	0.734	0.572-0.843
	Total	2.509	2.366	2.131-2.831	-	-	-	-	-	-	0.625	0.560	0.484-0.787
Temp (°C)		16.6	18	11-21	15.6	17	11-20	15.6	16	12-19.5	15.3	16	12-18
pH		-	6.7	5.8-7.3	-	7.4	7.1-7.5	-	7.1	6.8-7.4	-	7.0	6.8-7.6
D.O. (mg/l)		0.5	0.4	0.0-1.5	3.0	3.2	0.2-5.1	5.2	5.0	4.1-6.6	3.6	4.8	0.5-6.0
Alky (mg/l as Ca CO_3)		154	154	123-174	134	146	50-156	74	62	50-135	58	56	51-67
BOD (mg/l)	Total	192	185	179-218	76	75	60-99	50	52	35-67	25	24	14-37
	Soluble	117	103	39-200	35	39	24-58	31	31	18-40	16	18	7-27
COD (mg/l)	Total	369	296	222-712	98	94	86-115	95	89	71-134	78	76	64-95
	Soluble	138	144	45-219	52	56	33-76	46	42	33-81	41	42	33-48
SS (mg/l)	Total	195	211	100-248	53	52	23-78	44	47	22-69	42	52	16-57
	Volatile	147	136	81-233	41	44	17-50	32	34	20-39	28	28	13-44
NH_3 (mg/l)	Total	15.2	16.2	10.9-20.7	12.7	13.9	4.8-15.2	3.4	0.28	0.21-14.5	0.89	0.42	0.14-3.2
	Soluble	14.6	15.4	10.6-20.7	11.5	13.4	0.8-14.4	2.3	1.5	0.14-9.4	0.67	0.35	0.14-2.4
TKN (mg/l)	Total	30.9	33.5	16.9-46.2	20.4	22.0	8.1-23.8	9.5	7.5	5.3-21.4	5.8	6.0	3.0-7.6
	Soluble	18.1	19.9	11.9-22.1	16.5	16.8	7.6-23.5	5.3	4.0	2.5-13.3	3.4	3.5	0.56-6.4
NO_2 (mg/l)		-	-	-	-	-	-	0.25	0.26	0.13-0.39	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	6.5	6.6	2.3-9.3	-	-	-
P (mg/l)	Total	12.4	13.1	6.7-16.1				7.70	7.4	7.0-9.0	7.56	7.5	6.3-8.8
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.09	0.0	0.0-0.2
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	13,828*	11,000	1,900-23,000	1,223*	1,600	100-3,000
Algae cell count** (number/ml X 10^3)		-	-	-	69.70	69.70	-	170.90	170.90	-	130.00	130.00	-

* geometric mean
** represents only one sampling day

TABLE 6. ORANGE GROVE PERFORMANCE SUMMARY
MONTH OF APRIL 1976 (30 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow (m^3/day x 10^3)	Minimum	1.669	1.681	0.738-2.562	-	-	-	-	-	-	0.678	0.734	0.431-0.965
	Peak	2.945	2.975	2.059-3.895	-	-	-	-	-	-	1.014	1.037	0.572-1.245
	Total	2.574	2.623	1.851-3.134	-	-	-	-	-	-	0.893	0.900	0.522-1.071
Temp (°C)		21.9	23	15-24	21.8	22	15-24	21.8	23	15-24	21.4	23	15-26
pH		-	7.1	6-7-7.7	-	7.4	6.8-7.8	-	7.3	6.8-7.6	-	7.2	6.7-8.0
D.O. (mg/l)		0.2	0.0	0.0-1.5	1.8	1.5	0.1-5.8	4.3	4.2	2.5-6.9	2.5	2.4	1.2-5.8
Alky (mg/l as Ca CO_3)		146.7	150	98-172	133.4	136	102-154	77.7	76	52-114	75	75	61-95
BOD (mg/l)	Total	178	183	84-255	67	66	31-104	59	58	38-151	26	27	15-40
	Soluble	79	76	35-145	36	35	16-52	26	26	11-37	11	12	6-16
COD (mg/l)	Total	431	309	120-1141	105	104	67-134	92	91	73-134	68	69	37-93
	Soluble	112	98	50-286	55	54	34-77	40	38	23-83	38	36	25-56
SS (mg/l)	Total	172	143	68-472	52	49	28-113	65	65	43-82	34	34	18-56
	Volatile	126	118	50-303	43	42	23-70	46	45	25-69	25	25	12-44
NH_3 (mg/l)	Total	15.1	14.6	9.1-27.0	11.3	10.7	8.7-14.0	2.80	2.20	0.21-9.50	3.14	3.05	0.53-9.00
	Soluble	13.9	13.2	8.7-24.9	10.5	9.8	6.4-13.6	2.53	2.10	0.14-9.30	2.78	2.45	0.50-8.8
TKN (mg/l)	Total	30.4	29.0	13.7-44.1	19.2	19.7	16.2-22.0	9.56	9.50	5.60-12.40	7.80	7.40	4.70-14.10
	Soluble	20.7	18.1	11.6-36.0	14.9	15.2	11.6-17.8	5.20	4.90	0.90-9.60	5.47	5.30	1.5-11.6
NO_2 (mg/l)		-	-	-	-	-	-	1.12	0.46	0.10-5.70			
NO_3 (mg/l)		-	-	-	-	-	-	6.06	6.30	1.20-13.00	-	-	-
P (mg/l)	Total	11.1	9.7	3.0-35.2	-	-	-	7.26	7.00	5.40-9.10	6.90	6.80	5.1-9.3
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.1	0.1	0.0-0.3
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	103,288*	125,000	7,000-560,000	2,930*	3,400	50-88,000
Algae cell count (number/ml X 10^3)		-	-	-	275.33	268.00	35.00-529.00	418.33	434.50	130.22-719.00	201.83	98.00	13.00-460.00

April 23, 1976
L4 - Total NH_3 1.1, 0.77 (soluble)
Total TKN 5.5, 3.1 (soluble)

* geometric mean

TABLE 7. ORANGE GROVE PERFORMANCE SUMMARY

MONTH OF MAY 1976 (7 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	1.567	1.347	1.067-3.013	-	-	-	-	-	-	0.708	0.572	0.431-1.400
(m^3/day x 10^3)	Peak	3.418	3.255	2.608-4.663	-	-	-	-	-	-	1.079	1.03[illegible]	0.734-1.446
	Total	2.800	2.729	2.161-4.042	-	-	-	-	-	-	0.988	0.939	0.640-1.438
Temp (°C)		23.7	24	23-24	23	23	22-24	23	23	22-24	22.4	22	21-24
pH		-	7.5	7.2-7.7	-	7.6	7.4-7.9	-	7.5	7.4-7.7	-	7.6	7.4-7.6
D.O. (mg/l)		0.6	0.7	0.0-1.5	3.3	2.6	1.4-5.6	4.2	4.5	3.3-4.7	2.4	2.3	1.2-4.0
Alky (mg/l as Ca CO_3)		152.9	148	100-182	146.6	145	139-152	106	106	99-112	102	103	83-111
BOD (mg/l)	Total	175	174	130-244	58	57	43-76	45	45	33-57	21	22	13-30
	Soluble	76	72	63-96	31	33	22-41	25	24	16-44	12	13	6-18
COD (mg/l)	Total	291	279	166-390	120	109	83-168	111	74	57-271	69	61	47-123
	Soluble	102	95	72-142	56	54	33-93	46	39	38-77	45	43	35-66
SS (mg/l)	Total	145	158	47-230	51	42	18-113	45	45	36-53	38	31	17-110
	Volatile	95	96	44-161	35	31	13-81	28	28	19-32	29	21	12-94
NH_3 (mg/l)	Total	19.3	16.1	11.9-27.3	15.0	14.7	12.8-17.2	6.3	6.4	4.4-7.9	5.8	5.9	4.4-6.8
	Soluble	14.3	11.2	9.2-21.2	12.3	11.8	9.8-16.7	5.4	5.4	3.4-7.1	5.2	5.2	4.3-6.0
TKN (mg/l)	Total	29.4	25.8	17.2-40.7	23.5	22.1	16.1-33.6	12.1	12.4	10.4-13.4	10.1	10.1	8.8-11.2
	Soluble	20.4	17.9	12.0-32.9	18.7	19.3	15.6-21.3	9.6	9.6	8.3-11.1	8.6	8.7	7.3-9.7
NO_2 (mg/l)		-	-	-	-	-	-	1.60	1.60	0.81-2.5	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	3.9	3.9	3.3-4.8	-	-	-
P (mg/l)	Total	9.9	10.8	5.5-13.0	-	-	-	8.9	9.1	6.5-11.5	8.5	8.3	6.2-10.9
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0-0.0
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	209,690 *	220,000	23,000-700,000	2,457 *	3,000	100-11,000
Algae cell count ** (number/ml X 10^3)		-	-	-	59.09	59.09	-	133.00	133.00	-	89.00	89.00	-

* geometric mean
** represents only one sampling day

TABLE 8. ORANGE GROVE PERFORMANCE SUMMARY
MONTH OF JUNE 1976 (7 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	2.025	1.961	1.563-2.475	-	-	-	-	-	-	0.356	0.356	0.269-0.431
(m^3/day x 10^3)	Peak	3.002	3.130	2.487-3.342	-	-	-	-	-	-	0.568	0.572	0.318-0.806
	Total	2.926	3.002	2.445-3.289	-	-	-	-	-	-	0.473	0.458	0.387-0.708
Temp (°C)		26.1	26	25-27	27.7	28	26-29	28	28	26-29	26.9	27	26-28
pH		-	7.1	7.1-7.2	-	7.3	7.2-7.5	-	7.4	7.3-7.5	-	7.3	7.2-7.4
D.O. (mg/l)		0.9	0.8	0.0-1.6	2.9	2.8	2.1-3.6	3.1	2.8	2.0-4.6	1.8	1.0	0.7-4.5
Alky (mg/l as Ca CO_3)		131	138	94-147	93.3	95	83-99	98.9	95	93-115	102	105	95-108
BOD (mg/l)	Total	171	183	85-19[illegible]	66	60	50-85	56	55	43-71	23	21	18-32
	Soluble	71	72	44-99	37	35	28-53	29	28	21-38	14	13	11-21
COD (mg/l)	Total	359	352	107-539	101	101	65-128	81	82	69-92	63	67	45-73
	Soluble	92	94	61-148	46	44	35-72	42	38	35-54	45	44	21-63
SS (mg/l)	Total	272	219	137-450	98	98	51-148	59	48	33-117	38	32	18-74
	Volatile	167	148	89-297	63	63	37-96	39	31	10-101	27	17	16-69
NH_3 (mg/l)	Total	13.8	13.9	9.4-18.2	1.8	1.5	0.7-3.2	3.1	2.5	2.4-6.0	4.1	4.3	3.1-4.9
	Soluble	12.7	13.3	8.4-17.4	1.3	1.4	0.7-1.8	2.7	2.4	2.2-4.7	3.5	3.5	2.6-4.5
TKN (mg/l)	Total	26.6	25.3	21.0-36.4	9.3	9.8	7.8-10.6	9.5	9.4	9.1-10.9	8.0	7.9	7.1-9.5
	Soluble	17.4	17.2	12.7-24.5	4.7	4.5	3.9-6.4	6.2	6.0	5.5-7.8	7.0	6.8	6.4-8.3
NO_2 (mg/l)		-	-	-	-	-	-	0.77	0.70	0.06-1.40	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	1.19	1.10	0.64-2.00	-	-	-
P (mg/l)	Total	9.3	8.1	5.5-15.2	-	-	-	7.5	7.4	6.3-8.7	7.2	7.1	6.2-8.2
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0-0.0
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	116,130 *	58,000	25,000-640,000	2,687 *	3,000	1,000-6,000
Algae cell count** (number/ml X 10^3)		-	-	-	53.00	53.00	-	83.00	83.00	-	73.00	73.00	-

* geometric mean
** represents only one sampling day

TABLE 9. ORANGE GROVE PERFORMANCE SUMMARY
MONTH OF JULY 1976 (30 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	2.381	2.453	1.124-3.036							0.719	0.606	0.318-1.510
(m^3/day x 10^3)	Peak	3.512	3.543	1.658-4.288							1.052	1.037	0.356-1.711
	Total	3.425	3.429	2.574-4.213							0.950	0.961	0.341-1.582
Temp (°C)		27	27	23-29	29	29	24-31	29	29	25-31	28	28	25-30
pH		-	7.1	6.7-7.6	-	7.3	7.0-7.7	-	7.3	7.0-7.8	-	7.3	6.9-7.5
D.O. (mg/l)		0.9	0.8	0.0-4.0	2.5	2.4	0.6-6.0	2.2	2.0	0.8-6.9	2.0	1.4	0.4-7.2
Alky (mg/l as Ca CO_3)		118	113	103-160	85	84	68-102	96	97	86-105	96	94	85-110
BOD (mg/l)	Total	133	132	66-232	53	54	29-83	34	33	13-54	20	20	8-30
	Soluble	55	55	32-84	29	28	12-57	20	17	5-33	13	12	3-27
COD (mg/l)	Total	203	176	95-367	80	81	47-108	61	62	42-83	51	50	32-70
	Soluble	72	68	35-129	46	42	30-85	37	37	20-66	32	34	17-46
SS (mg/l)	Total	191	205	46-374	56	58	21-95	49	41	22-123	27	24	13-50
	Volatile	105	84	31-221	33	36	12-52	26	26	14-82	14	13	4-29
NH_3 (mg/l)	Total	11.6	11.4	6.3-17.5	3.2	2.6	0.7-6.6	4.5	4.4	2.5-6.5	5.0	5.1	3.0-7.5
	Soluble	10.8	10.6	5.6-14.3	2.8	2.3	0.2-6.6	4.1	3.9	2.3-6.3	4.3	4.6	2.5-7.4
TKN (mg/l)	Total	20.6	20.9	14.3-30.1	9.0	8.9	2.5-12.8	9.9	10.1	6.7-11.8	8.8	8.8	5.9-14.5
	Soluble	14.8	14.2	8.1-21.5	5.9	5.4	2.3-10.5	7.4	7.3	3.6-9.7	7.4	7.3	4.8-11.8
NO_2 (mg/l)								0.50	0.36	0.17-2.8			
NO_3 (mg/l)								0.38	0.28	0.12-0.95			
P (mg/l)	Total	6.8	6.5	2.0-12.7				6.8	6.8	5.4-8.6	6.7	6.6	5.6-9.3
Cl_2 (mg/l)	Residual										.01	0.0	0.0-0.1
Fecal Coli (counts/100 ml)								84,979*	85,500	11,000-320,000	947*	1,000	100-65,000
Algae Count (number/ml X 10^3)					117.77	106.00	72.60-186.00	135.95	130.00	71.70-200.00	81.50	83.00	57.00-106.00

* geometric mean

TABLE 10. ORANGE GROVE PERFORMANCE SUMMARY
MONTH OF AUGUST 1976 (7 DAYS)

Location		L2			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow (m^3/day x 10^3)	Minimum	2.131	2.120	1.855-2.680	-	-	-	-	-	-	0.594	0.576	0.431-0.802
	Peak	3.762	3.641	3.494-4.076	-	-	-	-	-	-	0.886	0.965	0.572-1.136
	Total	3.369	3.263	3.153-3.732	-	-	-	-	-	-	0.791	0.780	0.572-0.995
Temp (°C)		28.3	28	28-29	29.4	29	29-30	28.9	29	28-30	28.1	28	27.5-29
pH		-	7.1	6.9-7.4	-	7.2	7.0-7.5	-	7.2	7.1-7.4	-	7.2	7.1-7.3
D.O. (mg/l)		0.3	0.4	0.0-0.6	1.0	1.2	0.4-1.8	1.1	1.0	0.4-2.2	0.5	0.6	0.0-0.8
Alky (mg/l as Ca CO_3)		138	138	118-165	84.7	84	74-94	101	100	95-109	105	106	96-120
BOD (mg/l)	Total	151	147	121-183	56	51	35-88	45	42	30-61	25	23	14-43
	Soluble	68	68	49-106	36	28	26-68	28	26	19-40	16	17	9-20
COD (mg/l)	Total	201	185	154-287	86	86	62-121	75	80	45-98	66	67	52-83
	Soluble	86	82	61-134	51	46	32-102	39	36	32-57	44	41	32-61
SS (mg/l)	Total	122	100	76-231	61	60	50-73	44	38	26-77	30	29	18-43
	Volatile	70	66	38-103	42	40	35-54	28	28	18-33	18	18	10-26
NH_3 (mg/l)	Total	16.8	17.5	10.3-23.7	1.4	1.4	0.91-1.7	3.4	3.5	2.4-4.0	4.8	5.1	3.8-5.5
	Soluble	16.3	17.0	10.0-19.8	0.67	0.71	0.24-0.86	2.8	2.7	1.9-3.8	4.6	4.9	3.4-5.3
TKN (mg/l)	Total	25.6	25.2	18.9-33.2	8.1	8.1	7.3-9.1	9.5	9.5	8.7-10.1	9.4	9.6	8.5-10.2
	Soluble	21.4	22.2	15.2-31.4	4.6	4.1	2.9-6.0	6.2	6.2	4.7-7.3	7.8	7.3	7.1-9.1
NO_2 (mg/l)		-	-	-	-	-	-	0.33	0.35	0.06-0.46	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	0.19	0.16	0.08-0.34	-	-	-
P (mg/l)	Total	7.9	7.6	5.1-13.9	-	-	-	8.2	8.3	7.3-9.0	7.3	7.8	4.4-8.1
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.07	0.10	0.0-0.1
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	127,382*	130,000	69,000-300,000	10,782*	13,000	2,100-54,000
Algae cell count ** (number/ml X 10^3)		-	-	-	118.00	118.00	-	203.00	203.00	-	96.40	96.40	-

* geometric mean
** represents only one sampling day

TABLE 11. ORANGE GROVE PERFORMANCE SUMMARY
MONTH OF SEPTEMBER 1976 (30 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	1.533	1.453	0.783-2.203	-	-	-	-	-	-	0.772	0.799	0.431-1.192
(m^3/day x 10^3)	Peak	3.157	3.149	2.343-3.868	-	-	-	-	-	-	1.067	1.037	0.734-1.340
	Total	2.737	2.759	1.964-3.641	-	-	-	-	-	-	0.923	0.939	0.579-1.192
Temp (°C)		28	28	26-29	27	27	24-29	26	25	24-29	25	25	24-28
pH		-	7.2	6.9-7.5	-	7.4	6.9-7.7	-	7.1	6.6-7.7	-	7.2	6.5-7.5
D.O. (mg/l)		0.4	0.4	0.0-1.2	2.7	2.8	0.7-4.0	0.9	0.8	0.4-3.5	1.1	1.1	0.4-1.6
Alky (mg/l as Ca CO_3)		147	144	117-195	124	126	90-148	128	128	105-155	123	116	92-158
BOD (mg/l)	Total	170	168	102-223	62	62	40-85	48	45	34-71	30	28	17-55
	Soluble	74	75	36-120	38	38	24-55	30	29	19-48	18	18	10-30
COD (mg/l)	Total	230	229	124-382	82	80	63-118	65	66	46-88	58	56	38-78
	Soluble	89	90	47-155	49	48	33-65	45	43	22-69	43	45	21-64
SS (mg/l)	Total	146	140	80-278	42	40	13-100	21	20	9-50	19	18	8-37
	Volatile	104	[illegible]	56-227	30	29	9-78	13	12	5-29	12	10	5-26
NH_3 (mg/l)	Total	14.2	13.8	10.9-28.0	6.2	6.8	1.1-10.4	6.4	6.6	3.5-9.6	6.1	5.2	0.92-10.6
	Soluble	13.1	12.8	10.2-27.2	5.7	6.4	0.66-9.1	5.7	5.4	2.9-8.9	5.6	4.7	0.76-9.6
TKN (mg/l)	Total	23.6	22.4	17.8-47.8	12.6	12.6	6.8-18.4	11.0	11.2	7.3-14.6	10.4	10.2	7.3-14.6
	Soluble	17.9	16.9	13.9-34.7	9.8	10.2	5.2-13.4	9.5	10.0	6.5-12.9	9.2	9.0	4.5-13.1
NO_2 (mg/l)		-	-	-	-	-	-	0.10	0.07	0.02-0.28	-	-	-
NO_3 (mg/l)		-	-	-	-	-	-	0.12	0.12	0.02-0.23	-	-	-
P (mg/l)	Total	9.5	9.6	6.4-12.9	-	-	-	9.1	8.8	6.9-11.3	8.4	8.3	6.2-11.8
Cl_2 (mg/l)	Residual	-	-	-	-	-	-	-	-	-	0.01	0.0	0.0-0.1
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	189,332*	172,000	54,000-675,000	12,506*	37,000	80-200,000
Algae Count (number/ml X 10^3)		-	-	-	215.67	214.00	160.00-270.00	219.25	208.00	58.50-408.00	142.85	145.75	32.60-245.00

* geometric mean

TABLE 12. ORANGE GROVE PERFORMANCE SUMMARY
MONTH OF OCTOBER 1976 (7 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	1.378	1.272	0.810-2.248	-	-	-	-	-	-	0.428	0.431	0.318-0.606
(m^3/day x 10^3)	Peak	2.339	2.332	1.927-3.009	-	-	-	-	-	-	0.995	1.037	0.802-1.136
	Total	2.116	2.051	1.590-2.967	-	-	-	-	-	-	0.772	0.810	0.575-0.942
Temp (°C)		26.4	27	25-27	24.3	25	19-27	24	23	22-26	23.6	23	22-27
pH		-	7.3	7.1-7.3	-	7.5	7.2-7.6	-	7.0	6.6-7.1	-	6.9	6.4-7.0
D.O. (mg/1)		0.3	0.2	0.0-0.5	2.3	2.2	1.2-3.6	0.8	0.8	0.4-1.4	0.9	1.0	0.6-1.2
Alky (mg/1 as Ca CO_3)		155.7	157	131-176	104.3	104	95-110	142	146	118-154	136.4	137	130-142
BOD (mg/1)	Total	171	160	148-210	82	75	65-128	58	56	50-68	34	32	30-48
	Soluble	74	74	63-86	41	42	29-59	36	37	26-50	22	21	19-32
COD (mg/1)	Total	164	202	180-314	101	91	80-145	81	81	62-99	66	63	58-79
	Soluble	86	87	75-98	57	57	39-78	47	46	36-66	51	49	41-63
SS (mg/1)	Total	117	117	94-150	75	76	55-85	38	28	16-88	16	17	8-23
	Volatile	94	91	77-112	55	59	38-64	30	20	10-80	9	7	4-21
NH_3 (mg/1)	Total	13.5	13.4	8.8-22.0	0.73	0.0	0.0-4.7	6.5	7.8	0.3-9.8	9.9	9.6	7.9-13.4
	Soluble	12.6	12.4	8.4-20.0	0.67	0.0	0.0-4.7	5.8	7.2	0.2-8.7	8.8	8.6	6.8-12.2
TKN (mg/1)	Total	24.4	24.0	20.6-30.7	8.4	8.3	7.6-9.0	12.5	13.1	10.6-13.4	13.2	13.2	11.9-14.0
	Soluble	19.2	19.3	16.6-25.9	3.9	3.4	2.7-7.1	10.1	11.0	6.5-12.1	12.4	12.8	11.4-13.0
NO_2 (mg/1)		-	-	-	-	-	-	0.28	0.24	0.02-0.83	-	-	-
NO_3 (mg/1)		-	-	-	-	-	-	0.35	0.27	0.20-0.70	-	-	-
P (mg/1)	Total	9.6	9.3	8.8-10.9	-	-	-	8.9	8.6	8.1-9.9	9.1	8.8	7.9-10.7
Cl_2 (mg/1)	Residual	-	-	-	-	-	-	-	-	-	0.03	0.0	0.0-0.1
Fecal Coli (counts/100 ml)		-	-	-	-	-	-	221,537*	300,000	18,000-810,000	21,638*	20,000	6,000-67,800
Algae Count ** (number/ml X 10^3)		-	-	-	356.00	356.00	-	94.00	94.00	-	18.00	18.00	-

* geometric mean
** represents only one sampling day

TABLE 13. ORANGE GROVE PERFORMANCE SUMMARY

MONTH OF NOVEMBER 1976 (7 DAYS)

Location		L1			L2			L3			L4		
Parameter		Average	Median	Range	Average	Median	Range	Average	Median	Range	Average	Median	Range
Flow	Minimum	1.244	1.253	1.086-1.495	-	-	-	-	-	-	0.438	0.431	0.318-0.572
(m^3/day x 10^3)	Peak	2.930	2.899	2.778-3.130	-	-	-	-	-	-	0.971	0.961	0.802-1.136
	Total	2.506	2.441	2.313-2.816	-	-	-	-	-	-	0.782	0.787	0.651-0.920
Temp (°C)		17.7	16	15-20	18	18	15-21	19	18	15-21	18	17	16-21
pH		-	7.1	6.9-7.3	-	7.4	7.0-7.5	-	6.8	6.7-7.2	-	7.1	6.9-7.4
D.O. (mg/l)		0.3	0.2	0.0-0.6	2.3	2.4	0.6-3.8	0.9	0.8	0.3-1.8	0.8	0.8	0.4-1.3
Alky (mg/l as Ca CO_3)		173	173	140-200	129	126	108-150	147	146	142-152	141	141	132-153
BOD (mg/l)	Total	206	221	132-272	73	76	45-102	47	47	23-71	29	30	18-37
	Soluble	119	110	88-135	42	37	31-75	28	23	17-45	17	16	10-26
COD (mg/l)	Total	324	353	212-402	108	114	84-151	86	75	57-143	89	67	51-177
	Soluble	151	158	92-200	69	57	53-103	54	50	37-78	56	50	34-100
SS (mg/l)	Total	171	187	106-215	40	39	32-50	25	18	10-72	36	33	12-68
	Volatile	123	128	67-180	27	30	9-35	11	12	8-13	19	16	6-32
NH_3 (mg/l)	Total	20.0	19.2	17.9-22.8	7.5	6.6	5.3-11.0	9.7	10.0	8.8-10.3	9.4	9.2	8.2-12.6
	Soluble	17.6	16.2	15.3-20.8	7.0	6.4	4.4-10.2	9.2	8.8	8.6-10.2	8.9	8.6	7.5-12.4
TKN (mg/l)	Total	26.3	24.8	22.4-33.0	10.3	9.1	7.2-16.8	12.2	12.4	10.3-13.7	11.4	11.3	9.6-14.3
	Soluble	20.9	19.3	18.0-26.9	8.6	8.4	6.3-12.5	11.0	10.8	9.8-12.2	10.5	10.6	8.2-13.8
NO_2 (mg/l)			-	-	-	-	-	0.04	0.05	0.03-0.05	-	-	-
NO_3 (mg/l)			-	-	-	-	-	0.19	0.21	0.14-0.24	-	-	-
P (mg/l)	Total	10.3	10.9	7.9-11.3	-	-	-	9.3	9.3	8.3-10.0	10.0	9.7	8.6-12.9
Cl_2 (mg/l)	Residual		-	-	-	-	-	-	-	-	0.0	0.0	0.0-0.3
Fecal Coli (counts/100 ml)			-	-	-	-	-	133,219*	150,000	65,000-180,000	58,744*	87,000	15,000-130,000
Algae Count** (number/ml X 10^3)			-	-	312.00	312.00	-	120.00	120.00		93.00	93.00	-

* geometric mean
** represents only one sampling day

SECTION 7

DISCUSSION OF RESULTS

GENERAL

This section will discuss monitoring results with respect to design criteria and the ability of the system to comply with secondary treatment discharge standards as well as those specified by the Mississippi Air and Water Pollution Control Commission. The influence of seasonal variation on performance will be noted where applicable. Monthly and yearly mean values of parameters are presented to illustrate long term trends and variations.

As illustrated by Figure 1 sampling points L1, L2, L3, and L4 correspond to quality characteristics of raw wastewater influent, effluent from Pond 1, effluent from Pond 2 prior to chlorination, and final effluent from the settling Cell S2, respectively.

Data collected at the Orange Grove Lagoon site reflected performance of a small, series operated aerated lagoon system located in the deep South treating essentially all residential wastewater. A complete listing of all data collected during the study period of December 1975 through November 1976 is contained in Appendix A and Appendix B.

HYDRAULIC PERFORMANCE

The monthly average influent and effluent daily flow-rates are shown in Table 14 and graphically illustrated by Figure 2. Effluent flows were monitored from Cell S2 which received approximately twenty-three percent of the flow from the second aeration basin. During January, 1976 an additional flow meter was installed at location F4 (see Figure 1) to allow for a system flow mass balance. Total effluent flow measurement commenced in February and continued for the remainder of the study. The average monthly daily influent flow-rate varied from 3,425 m^3/day (0.905 MGD) in July to 2,116 m^3/day (0.559 MGD) in October. The yearly average influent flow-rate was 2,900 m^3/day (0.766 MGD). This calculates as a per capita hydraulic load to the lagoon system of approximately 0.58 m^3/person/day (153 gal/capita/day). The yearly average influent daily flow-rate exceeded the hydraulic design flow-rate of 0.5 MGD by 1.53 times. During low and high flow months, the design flow was exceeded by 1.12 and 1.81 respectively.

The data indicates significant infiltration and inflow into the sewer system. This is evidenced by Figure 2 showing peak influent flows occurring during the rainy summer period (May-August) which is typical of the Gulf Coast climate. High ground water and sandy soil conditions contribute greatly to

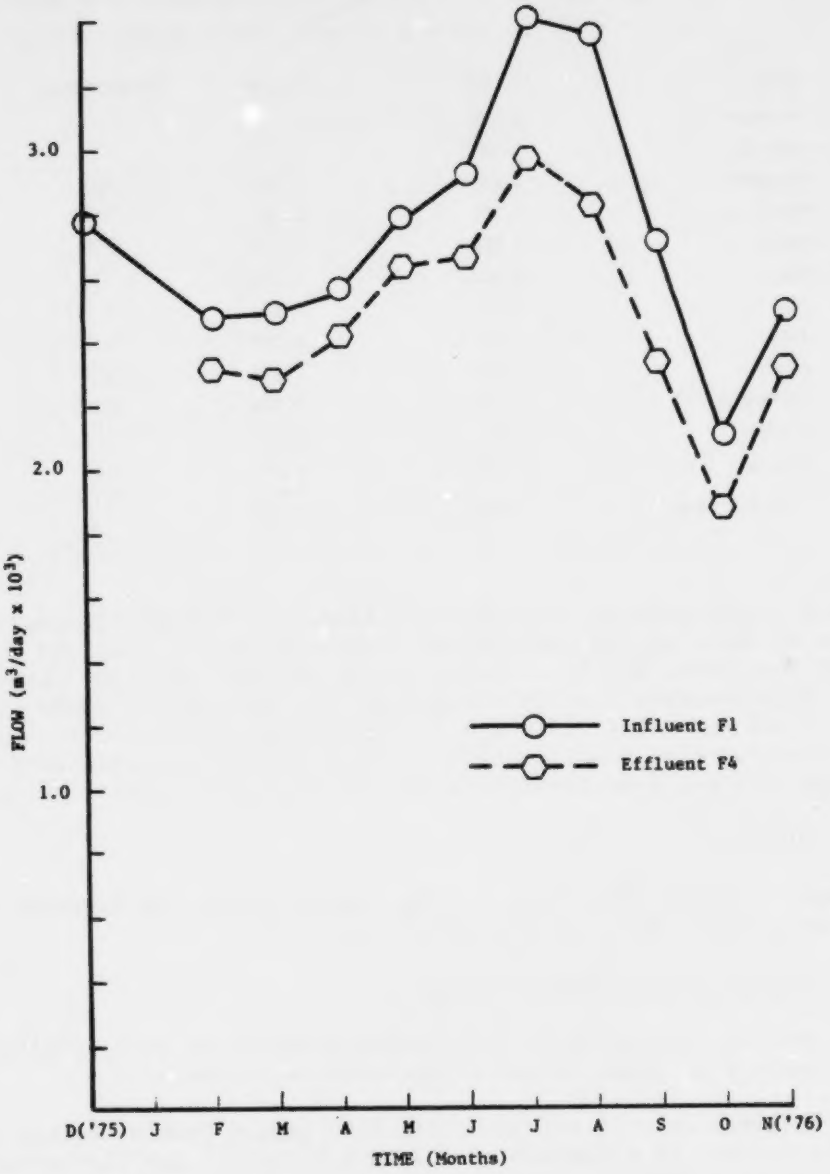


Figure 2. Monthly average influent and effluent daily flowrates.

the problem of infiltration.

TABLE 14. MONTHLY AVERAGE FLOW-RATE OF RAW WASTEWATER INFLUENT AND FINAL EFFLUENT FROM THE ORANGE GROVE AERATED LAGOON SYSTEM

	Flow-rate (m^3/day x 10^3) - monthly average		
MONTH	INFLUENT	EFFLUENT	PERCENT LOSS
December '75	2.790	-	-
January	3.259	-	-
February	2.483	2.316	6.7
March	2.509	2.323	7.4
April	2.574	2.430	5.6
May	2.800	2.665	4.8
June	2.926	2.684	8.3
July	3.425	2.983	12.9
August	3.369	2.843	15.6
September	2.737	2.358	13.8
October	2.116	1.877	11.3
November '76	2.506	2.332	6.9
YEARLY MEAN	2.900	2.535	10.0

Based on the average influent flow-rate, the average theoretical detention times of Cells A1, A2, and S2 are respectively 6.8, 10.3 and 5.0 days. Accounting for losses due to evaporation and seepage retention times were increased approximately five to sixteen percent as shown by Table 14. Design detention times were 10.4, 15.8 and 2.5 days respectively for Basins A1, A2, and S2. Consequently, stabilization time was reduced approximately 35% during average influent flow conditions and 45% during the peak flow period.

ORGANIC REMOVALS

Organic removal efficiency for the lagoon system was assessed in terms of total and soluble BOD_5 and COD reductions.

Total Biochemical Oxygen Demand (BOD_5)

The monthly average total BOD_5 values observed at each sampling location are reported in Table 15 and illustrated in Figure 3.

The influent monthly average total BOD ranged from a maximum of 214 mg/l during January to a minimum of 133 mg/l in July. Low flow months were characterized by higher concentrations as compared to the diluted influent observed during the wet summer months. This trend existed for most performance parameters evaluated.

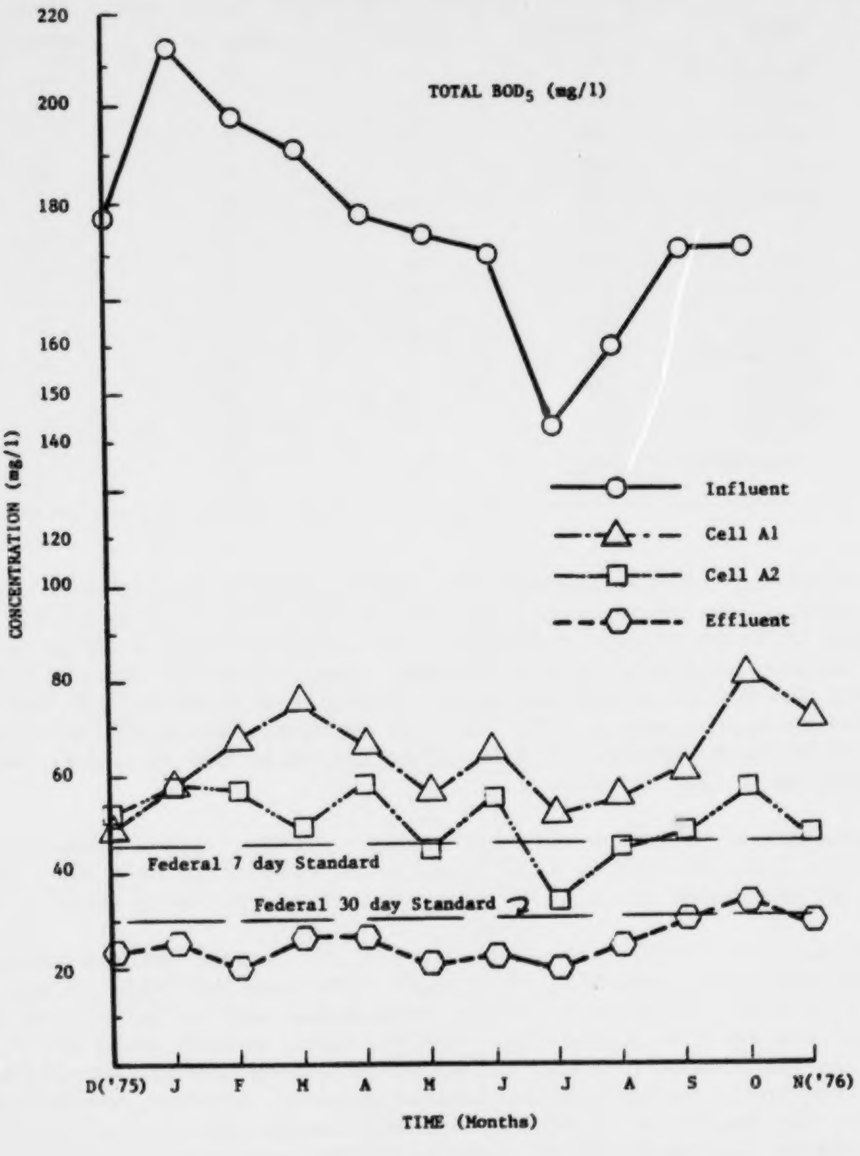


Figure 3. Monthly average total Biochemical Oxygen Demand (BOD_5) removal for the Orange Grove Lagoon System.

TABLE 15. MONTHLY AVERAGE TOTAL BIOCHEMICAL OXYGEN DEMAND CONCENTRATION OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Total biochemical oxygen demand (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	177	49	53	24
January	214	59	59	26
February	198	68	57	20
March	192	76	50	25
April	178	67	59	26
May	175	58	45	21
June	171	66	56	23
July	133	53	34	20
August	151	56	45	25
September	170	62	48	30
October	171	82	58	34
November '76	206	73	47	29
YEARLY MEAN	176	62	50	25

A weighted average influent BOD_5 was calculated as 176 mg/l over the study period. This represents a per capita raw waste loading of 0.1 kg BOD_5/person/day (0.22 lb BOD_5/person/day). The actual organic loading to Pond A1 was 504 kg BOD_5/ha·d (450 lb BOD /ac/day) compared to the design loading of 374 kg BOD_5/ha·d (334 lb BOD /ac/day). During the study Cell A1 was therefore overloaded by approximately 26%. Cell A2 which was designed for an organic loading of 86 kg BOD_5/ha·d (76.8 lb/ac/day) experienced an actual loading of 117 kg BOD_5/ha·d (104 lb/ac/day).

Calculations based on weighted monthly average values indicate a 64.7% reduction in Cell A1 with an additional 18.8% removal in Cell A2. The settling Cell S2 accounted for a 49.6% reduction of its incoming BOD_5.

Overall total BOD_5 removal averaged 71.4% through the two lagoons with an average effluent total BOD_5 of 25 mg/l. As shown by Table 15 and Figure 3 secondary criteria of 30 mg/l (30 day monitoring) and 45 mg/l (7 consecutive day limit) was met for all months. The stringent permit level of 15 mg/l BOD_5 set by the Mississippi Air and Water Pollution Control Commission owing to discharge into a water quality limited segment, however, was exceeded in all cases. It should be noted that without incorporation of a final settling cell to remove suspended solids, secondary treatment quality effluent would have been unattainable. As shown in Figure 3 effluent organic concentrations were relatively unaffected by seasonal fluctuations. The great buffer capacity of the lagoon system to reduce influent varability is also reflected by

Figure 3. While most of the BOD_5 is removed in Cell A1, the second cell in series provides additional polishing with reserve capacity to handle influent organic variation.

Soluble Biochemical Oxygen Demand

The monthly average effluent soluble BOD_5 concentrations for each sampling location are reported in Table 16 and shown graphically in Figure 4. The monthly average effluent soluble BOD_5 for the entire system varied from 10 mg/1 (February) to 22 mg/1 (October), with a yearly mean of 15 mg/1. This value is 42.5% less than the total effluent BOD_5 observed. Thus, if total effluent solids were removed by some polishing process an overall BOD_5 removal of 91.7% would be realized over the study period with effluent BOD_5 concentrations less than the state requirement of 15 mg/1 being reported for six of the twelve months studied. Total to soluble BOD_5 accumulative removals of 79.3%, 84.4%, and 91.7% were found for Cells A1, A2, and S2 respectively.

The importance of the second aeration cell is better demonstrated by reviewing soluble BOD_5 removals. Approximately 25% of the influent soluble BOD_5 was stabilized by Cell A2 with effluent quality meeting secondary standards 8 out of 12 months (yearly average 28 mg/1). The importance of the settling cell in terms of soluble organic removal is emphasized by Figure 4.

TABLE 16. MONTHLY AVERAGE SOLUBLE BIOCHEMICAL OXYGEN DEMAND CONCENTRATION OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Soluble biochemical oxygen demand (mg/1) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	94	32	25	12
January	88	41	31	16
February	84	46	31	10
March	117	35	31	16
April	79	36	26	11
May	76	31	25	12
June	71	37	29	14
July	55	29	20	13
August	68	36	28	16
September	74	38	30	18
October	74	41	36	22
November '76	119	42	28	17
YEARLY MEAN	78	36	28	15

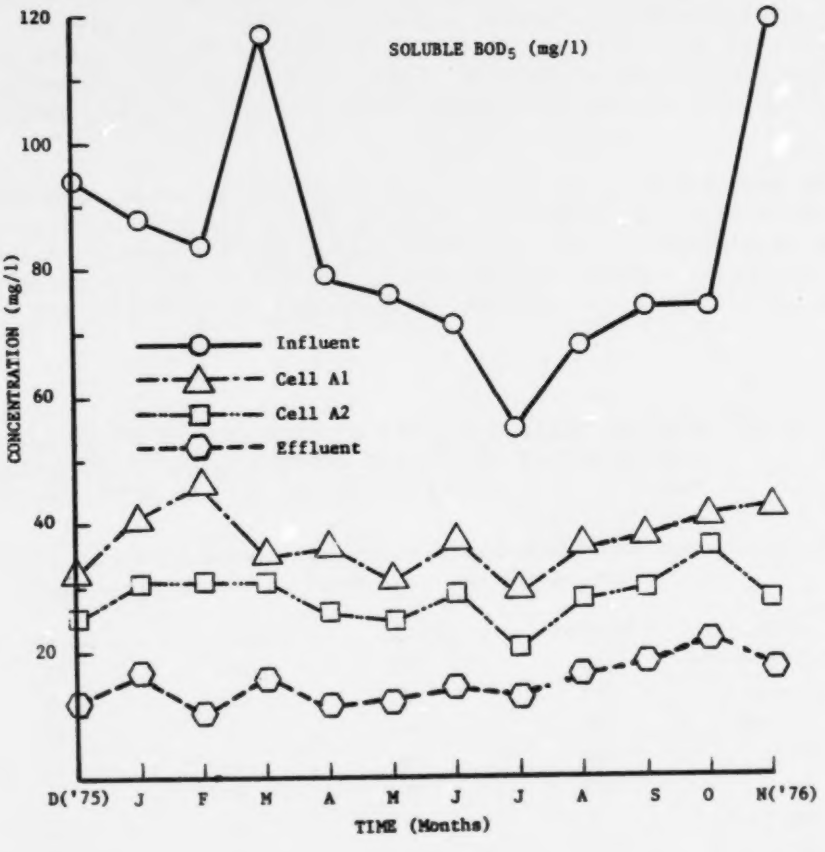


Figure 4. Monthly average soluble BOD_5 removal for the Orange Grove Lagoon System.

Removal trends were similar to those observed for total BOD reductions with little or no seasonal correlation. Soluble influent BOD accounted for approximately 45% of the total. There exists no federal or state discharge standards for soluble BOD_5.

Total Chemical Oxygen Demand (TCOD)

The monthly average total COD values observed at each sampling location are shown in Table 17 and Figure 5. The influent monthly average total COD ranged from a maximum of 510 mg/l in December to a minimum of 164 mg/l during October. Generally, higher concentrations were experienced during the low flow winter months. A weighted average influent total COD of 332 mg/l was reported during the study period. Accumulative total COD reductions were 71.5%, 76.2%, and 80.1%, respectively for Cells A1, A2, and S2. These relatively high COD reductions accounted for an average system effluent concentration of 66 mg/l. As with the BOD_5 data, almost all organic reduction occurs in Cell A1 with Cells A2 and S2 providing some additional polishing and variability reductions. Seasonal fluctuations in effluent quality does not appear significant.

TABLE 17. MONTHLY AVERAGE TOTAL CHEMICAL OXYGEN DEMAND (COD) CONCENTRATION OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Total chemical oxygen demand (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	510	105	87	88
January	457	96	82	71
February	459	105	90	77
March	369	98	95	78
April	431	105	92	68
May	291	120	111	69
June	359	101	81	63
July	203	80	61	51
August	201	86	75	66
September	230	82	65	58
October	164	101	81	66
November '76	324	108	86	89
YEARLY MEAN	332	95	79	66

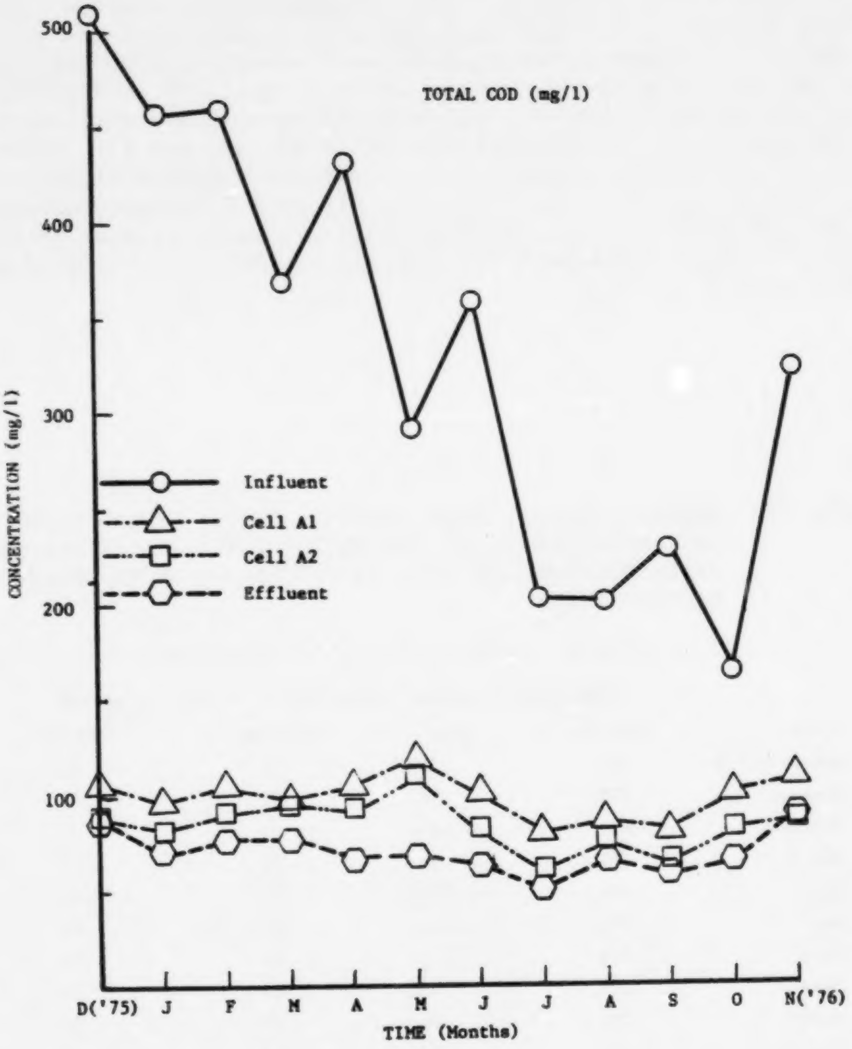


Figure 5. Monthly average total Chemical Oxygen Demand (COD) removal for the Orange Grove Lagoon System.

Soluble Chemical Oxygen Demand (SCOD)

The monthly average effluent soluble COD concentrations for each cell is shown in Table 18 and Figure 6. The average soluble COD influent concentration of 103 mg/l represents 31% of the influent total COD. Removal trends followed those observed for total COD. Accumulative soluble COD reductions for Cells A1, A2, and S2 were 48.8%, 59.5%, and 61.5%, respectively. Residual effluent soluble COD ranged from 32 to 56 mg/l with a mean of 40 mg/l. If complete solids separation was achieved, COD removal (total influent to soluble effluent) would approach 88%. Due to the long residence time employed by the lagoon system higher COD reductions are generally experienced as compared to activated sludge or trickling filter treatment methods. There currently exists no federal or state discharge requirements for COD effluent levels for the Orange Grove Lagoon System.

SOLIDS REMOVAL

Results of total and volatile solids reduction by the lagoon system is discussed as follows.

TABLE 18. MONTHLY AVERAGE SOLUBLE CHEMICAL OXYGEN DEMAND (SCOD) LEVELS OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Soluble chemical oxygen demand (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A1	EFFLUENT
December '75	144	60	42	36
January	120	56	41	38
February	113	55	36	35
March	138	52	46	41
April	112	55	40	38
May	102	56	46	45
June	92	46	42	45
July	72	46	37	32
August	86	51	39	44
September	89	49	45	43
October	86	57	47	51
November '76	151	69	54	56
YEARLY MEAN	103	53	42	40

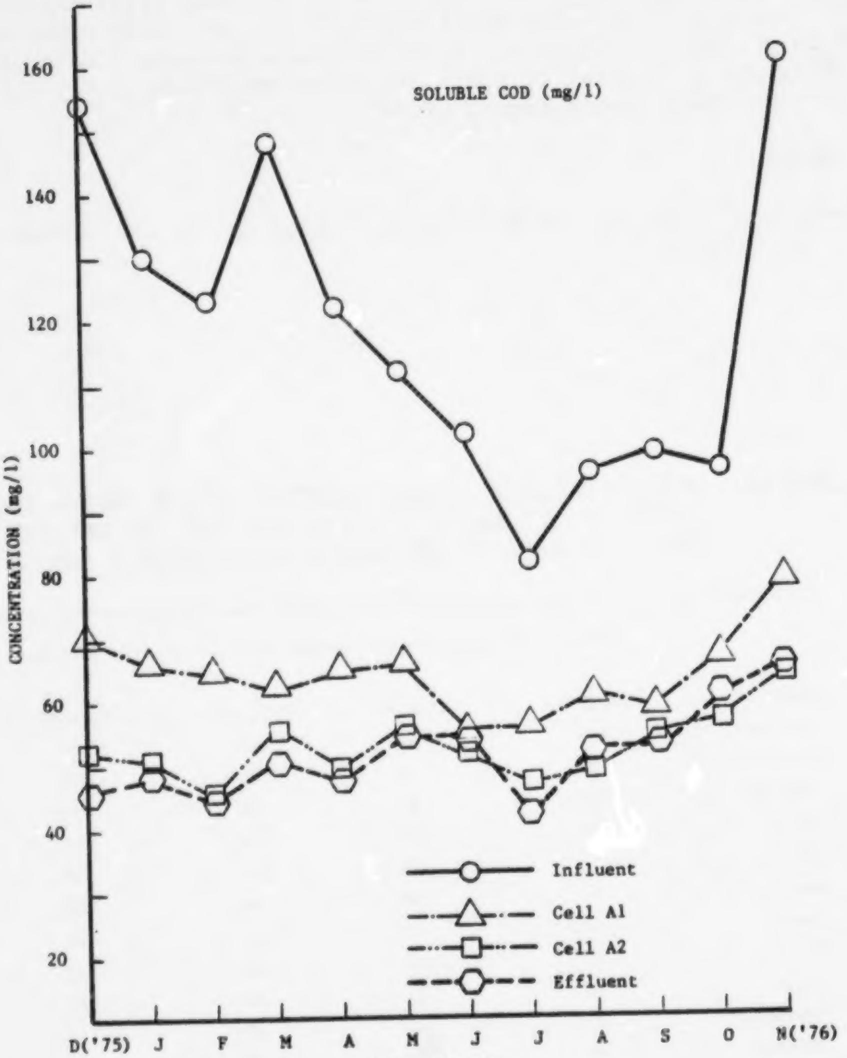


Figure 6. Monthly average soluble COD removal for the Orange Grove Lagoon System.

Total Suspended Solids (TSS)

The monthly average total suspended solids concentrations for raw sewage influent and lagoon effluents are presented in Table 19 and Figure 7.

The monthly average raw sewage influent suspended solids concentration ranged from 291 mg/l in January to 117 mg/l in October. The yearly average level was 194 mg/l which is representative of typical domestic sewage. A wide variation of TSS concentrations was experienced during the study period as shown by Figure 7.

The final effluent monthly average suspended solids concentration varied from 16 mg/l in October to a high of 50 mg/l during February. A yearly average of 31 mg/l TSS was observed which is near the regulatory limit of 30 mg/l. Sampling results for the 30 day monitoring periods indicated 30 day average values of 32, 34, 27, and 19 mg/l for respective months of January, April, July, and September. Only during the month of February was the 45 mg/l seven day average value exceeded.

Data indicates an overall 84.1% reduction of TSS with about 74% removal occurring in the first lagoon. This data is somewhat misleading, however, since effluent solids from the lagoon system were primarily algae cells. The settling pond was effective in reducing the influent TSS by about 31%. While this cell was designed for a 2.5 day detention period at a flow of 1325 m^3/day

TABLE 19. MONTHLY AVERAGE SUSPENDED SOLIDS CONCENTRATION OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Suspended solids (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	233	38	46	42
January	291	36	43	32
February	184	52	50	50
March	195	53	44	42
April	172	52	65	34
May	145	51	45	38
June	272	98	59	38
July	191	56	49	27
August	122	61	44	30
September	146	42	21	19
October	117	75	38	16
November '76	171	40	25	36
YEARLY MEAN	194	50	44	31

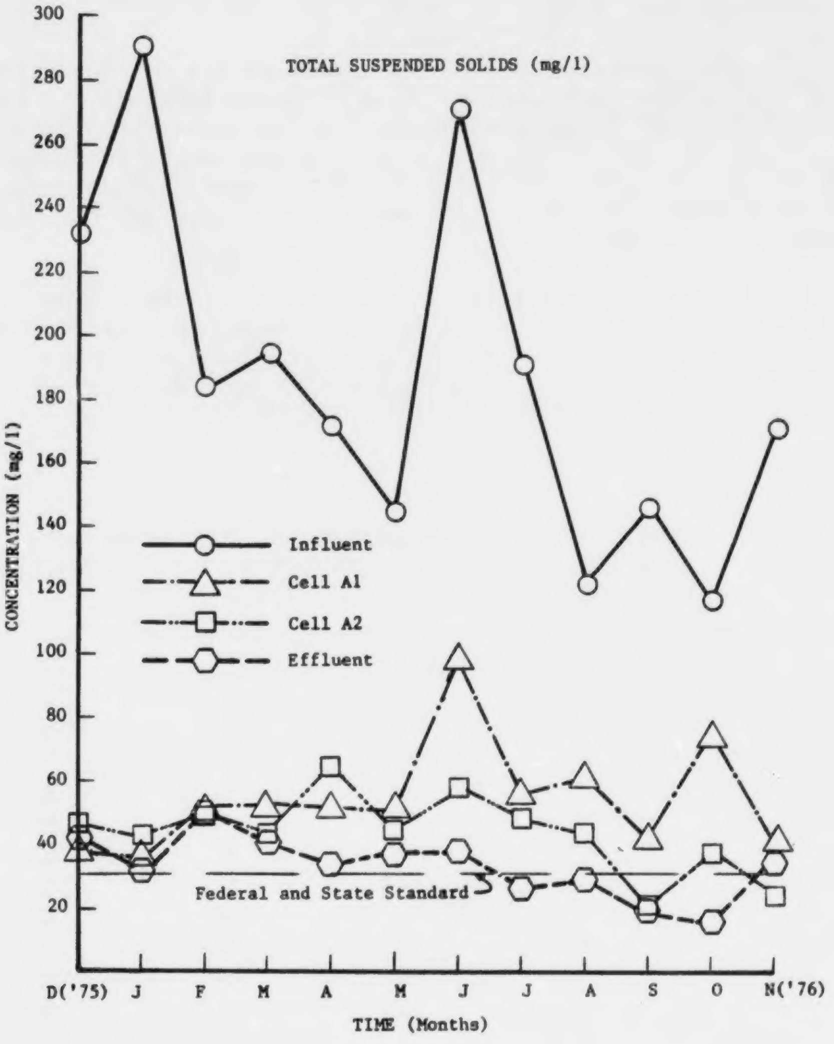


Figure 7. Monthly average total suspended solids removal for the Orange Grove Lagoon System.

(350,000 gpd), operation during the study resulted in an actual flow of about 674 m^3/day (178,000 gpd). Actual detention time in settling Cell S2, then was almost 5 days which tended to enhance algae growth.

Volatile Suspended Solids (VSS)

The monthly average effluent volatile suspended solids (VSS) concentrations observed at each sampling station are reported in Table 20 and graphically illustrated in Figure 8. Trends are similar to those for TSS previously discussed. Both influent and effluent TSS exhibited a 70% volatile content. System volatile solids reduction averaged 84.2% with about 73% being removed in the first cell. Data indicates approximately 0.35 mg BOD_5/mg TSS or about 0.5 mg BOD_5/mg VSS. Currently, no state or federal discharge limitations have been established for effluent VSS levels.

NUTRIENT REMOVAL

Lagoon system performance in terms of nutrient removal was assessed by monitoring concentrations of ammonia, total Kjeldahl, nitrite, and nitrate nitrogens and total phosphorus. Results are discussed as follows:

TABLE 20. MONTHLY AVERAGE VOLATILE SUSPENDED SOLIDS CONCENTRATION OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Volatile suspended solids (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	176	33	43	39
January	230	33	36	26
February	136	44	44	36
March	147	41	32	28
April	126	43	46	25
May	95	35	28	29
June	167	63	39	27
July	105	33	26	14
August	70	42	28	18
September	104	30	13	12
October	94	55	30	9
November '76	123	27	11	19
YEARLY MEAN	136	37	31	22

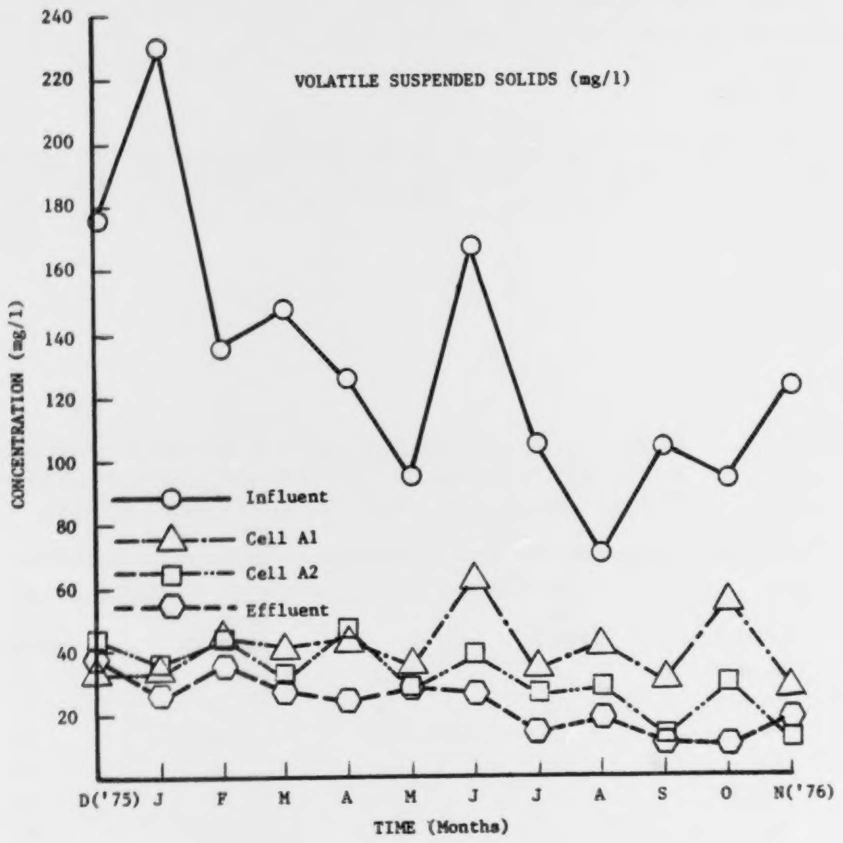


Figure 8. Monthly average volatile suspended solids removal for the Orange Grove Lagoon System.

Ammonia Nitrogen (NH_3-N)

Tables 21 and 22 tabulate respectively average monthly total and soluble ammonia concentrations observed at sampling locations during the study period. Results are also graphically illustrated in Figures 9 and 10.

The total ammonia influent concentration ranged from a high of 20.0 mg/l in November (low flow) to a low of 11.6 mg/l during July (high flow period) with a yearly weighed mean of 15.0 mg/l. The soluble NH_3-N content represented approximately 92% of the total concentrations at all sample locations. Consequently, complete removal of solids would not result in significant additional ammonia reductions. As shown by Figures 9 and 10 very high removals were affected within the first cell during summer months (June through August). NH_3-N assimilation by the biomass during this time was greatest due to temperature influence on metabolic rates. During the summer total NH_3-N removal averaged 79% with an average residual of 2.7 mg/l. Increases in total and soluble NH_3-N levels, however, were noted following both the second aeration cell and settling basin for the months of June through November. This may be attributable to the higher temperatures increasing benthic decomposition rates of settled sludge solids and algae cells with subsequent feedback of ammonia to the overlying waters. Chlorination following sampling location L3 may have resulted in algae cell death with release of NH_3-N into solution.

TABLE 21. MONTHLY AVERAGE TOTAL AMMONIA NITROGEN (NH_3-N) CONCENTRATION OF THE WASTEWATER INFLUENT AND EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

MONTH	Total ammonia nitrogen (mg/l) - monthly average			
	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	19.0	11.6	7.6	7.5
January	16.5	11.5	7.0	7.3
February	14.0	12.4	0.5	3.1
March	15.2	12.7	3.4	0.9
April	15.1	11.3	2.8	3.1
May	19.3	15.0	6.3	5.8
June	13.8	1.8	3.1	4.1
July	11.6	3.2	4.5	5.0
August	16.8	1.4	3.4	4.8
September	14.2	6.2	6.4	6.1
October	13.5	0.7	6.5	9.9
November '76	20.0	7.5	9.7	9.4
YEARLY MEAN	15.0	8.0	5.1	5.5

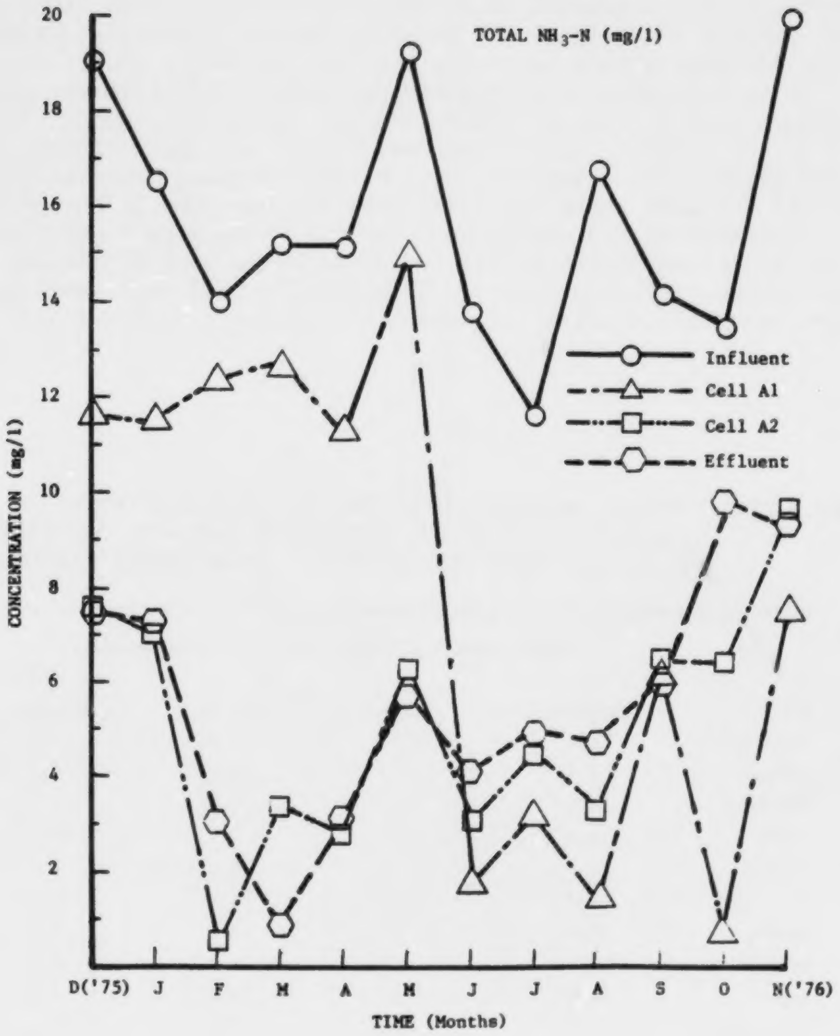


Figure 9. Monthly average total ammonia removal for the Orange Grove Lagoon System.

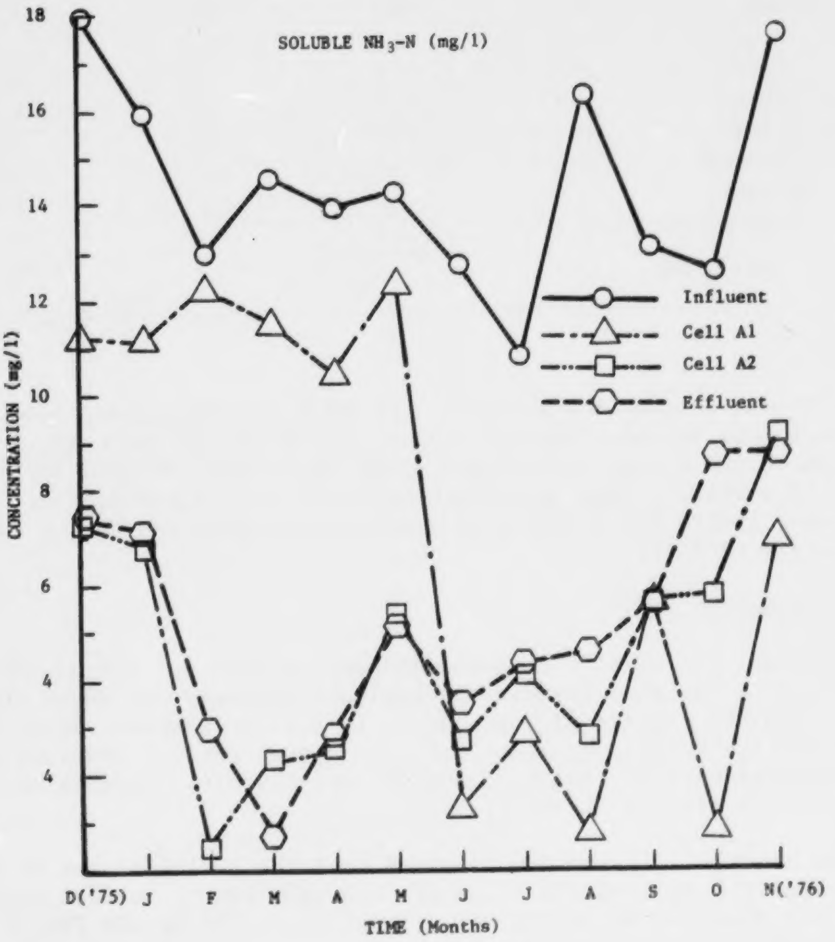


Figure 10. Monthly average soluble ammonia removal for the Orange Grove Lagoon System.

TABLE 22. MONTHLY AVERAGE SOLUBLE AMMONIA NITROGEN (NH_3-N) LEVEL OF THE WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Soluble ammonia nitrogen (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	17.9	11.2	7.3	7.4
January	15.9	11.1	6.8	7.2
February	12.9	12.2	0.5	3.0
March	14.6	11.5	2.3	0.7
April	13.9	10.5	2.5	2.8
May	14.3	12.3	5.4	5.2
June	12.7	1.3	2.7	3.5
July	10.8	2.8	4.1	4.3
August	16.3	0.7	2.8	4.6
September	13.1	5.7	5.7	5.6
October	12.6	0.7	5.8	8.8
November '76	17.6	7.0	9.2	8.9
YEARLY MEAN	13.9	7.4	4.7	5.1

Effluent levels of both total and soluble ammonia were lowest during the period from February through August. A low of 0.9 mg/l NH_3-N was observed for March and a high of 9.9 mg/l total NH_3-N was reported during October. The yearly average system reduction was 63.7% with a residual of 5.5 mg/l. No effluent limits for total or soluble ammonia nitrogen exists for the Orange Grove facility.

Kjeldahl Nitrogen (KN)

Kjeldahl nitrogen is composed of both organic and ammonia nitrogen. The numerial difference between the Kjeldahl nitrogen and NH_3-N concentrations yields the organic nitrogen level in a given sample. Both total and soluble average monthly Kjeldahl nitrogen concentrations observed during the study are presented in Tables 23 and 24 respectively. Results are shown graphically in Figures 11 and 12.

The average influent TKN recorded over the twelve months of data collection was 26.2 mg/l with a range of 20.6 mg/l (July) to 30.4 mg/l (April). The soluble fraction accounted for approximately 73% of the TKN at all locations except the final effluent which was characterized by an 83% soluble contribution.

Removal trends followed those for NH_3-N with significant reductions in Cell A1 during June, July, and August as expected. Also, as with NH_3-N data, slight increases were observed during these months in the effluent from Cell A2. Lowest effluent concentrations were found during the period from February

TABLE 23. MONTHLY AVERAGE TOTAL KJELDAHL NITROGEN (TKN) CONCENTRATIONS OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE LAGOON SYSTEM

	Total kjeldahl nitrogen (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	29.7	19.4	13.1	12.1
January	29.0	19.0	13.6	12.5
February	21.0	19.6	6.7	8.2
March	30.9	20.4	9.5	5.8
April	30.4	19.2	9.6	7.8
May	29.4	23.5	12.1	10.1
June	26.6	9.3	9.5	8.0
July	20.6	9.0	9.9	8.8
August	25.6	8.1	9.5	9.4
September	23.6	12.6	11.0	10.4
October	24.4	8.4	12.5	13.2
November '76	26.3	10.3	12.2	11.4
YEARLY MEAN	26.2	14.9	10.9	9.8

TABLE 24. MONTHLY AVERAGE SOLUBLE KJELDAHL NITROGEN (SKN) LEVELS OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGEGROVE AERATED LAGOON SYSTEM

	Soluble kjeldahl nitrogen (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	26.6	16.1	9.9	9.1
January	25.2	11.0	10.4	10.5
February	18.2	15.8	3.4	5.9
March	18.1	16.5	5.3	3.4
April	20.7	14.9	5.2	5.5
May	20.4	18.7	9.6	8.6
June	17.4	4.7	6.2	7.0
July	14.8	5.9	7.4	7.4
August	21.4	4.6	6.1	7.8
September	17.9	9.8	9.5	9.2
October	19.2	3.9	10.1	12.4
November '76	20.9	8.6	11.0	10.5
YEARLY MEAN	19.8	10.6	8.0	8.1

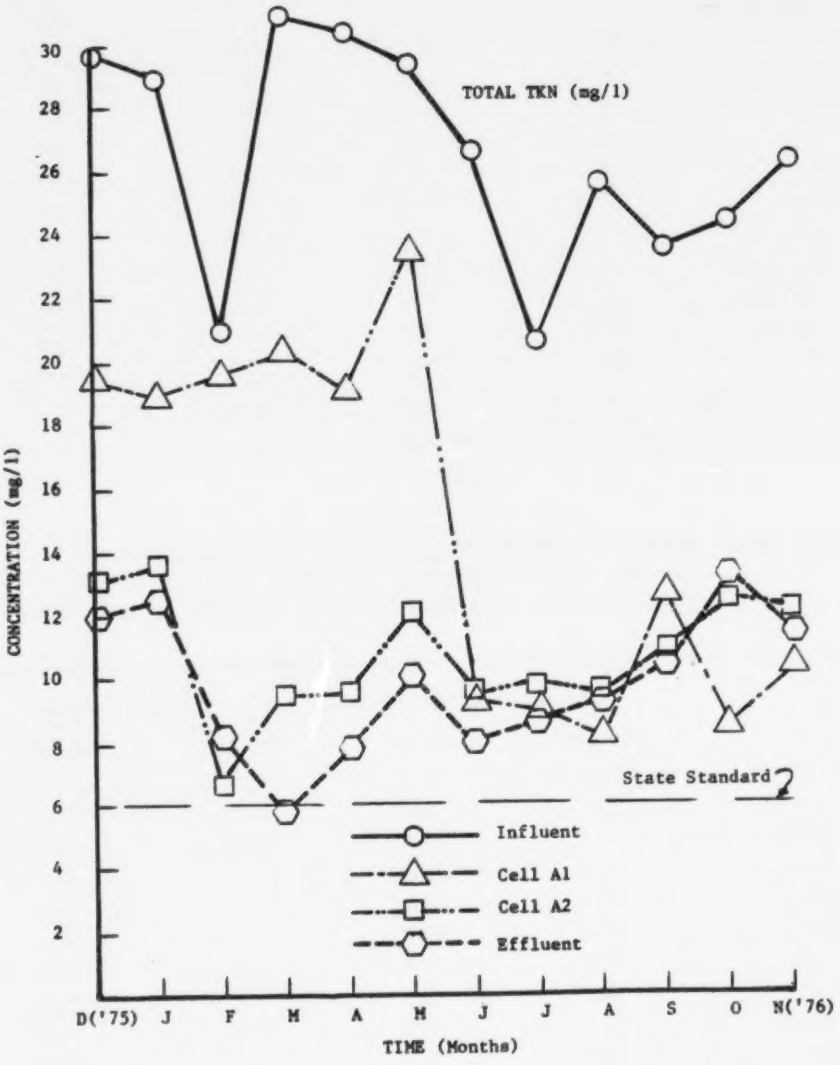


Figure 11. Monthly average total Kjeldahl nitrogen removal for the Orange Grove Lagoon System.

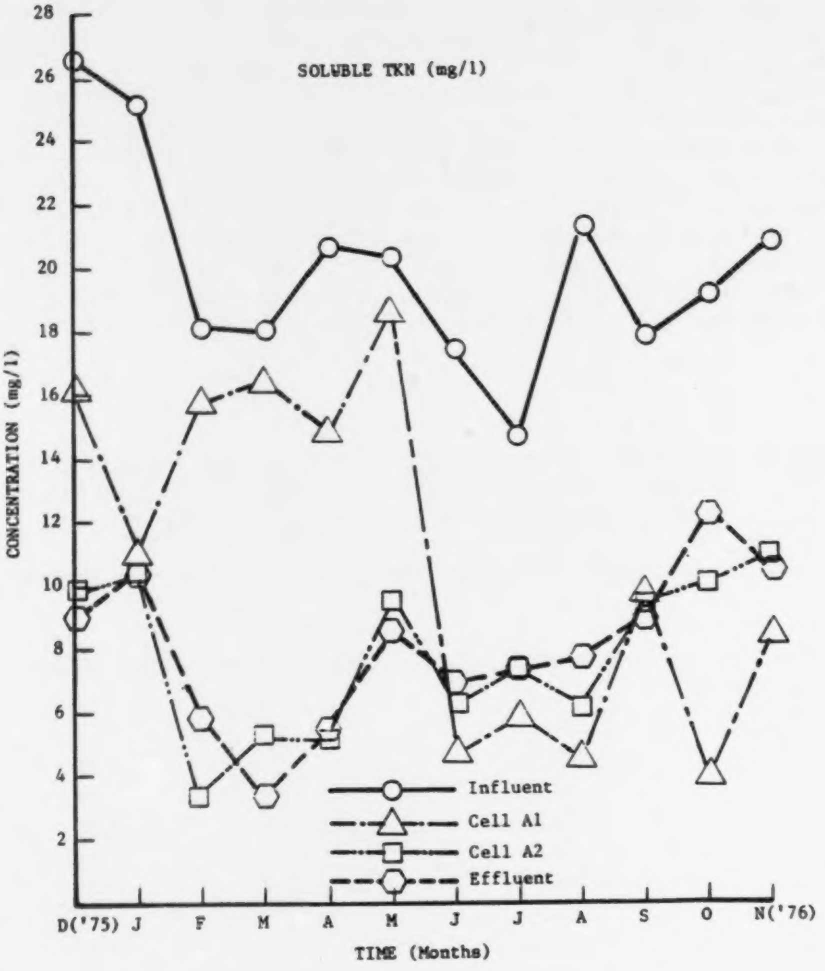


Figure 12. Monthly average soluble Kjeldahl nitrogen removal for the Orange Grove Lagoon System.

through August. Average effluent Kjeldahl nitrogen content was 9.8 and 8.1 mg/l respectively for total and soluble concentrations. These represent overall system reductions of 62.4% and 59.0%. Effluent limitations as imposed by the Mississippi Air and Water Pollution Control Commission limit TKN levels to 6.0 mg/l. Consequently, the system violated this criteria eleven of the twelve months studied.

Nitrite and Nitrate Nitrogen (NO_2& NO_3-N)

Lagoon system performance as indicated by nitrite and nitrate levels is summarized in Table 25 and Figure 13. Nitrite nitrogen is an intermediate which is quickly oxidized to the nitrate species. The presence of these forms indicate the activity of specific bacterial population (*Nitrosomonas* and *Nitrobacter* respectively) and the relative stability of the effluent. As shown by Figure 13 highest concentrations of both NO_2^- and NO_3^- were observed from February through March. It would be expected, however, that highest levels would be experienced during summer months when metabolic activity of the nitrifiers is greatest. If one examines the data, one notes oxygen concentrations in Cell A2 to be less than or equal to about 2 mg/l for the months of July through November. Hence nitrification was inhibited during this period due to low oxygen content. If higher dissolved oxygen levels were provided, it is anticipated that nitrite and nitrate levels would have increased with concurrent decreases in TKN and NH_3-N concentrations.

TABLE 25. MONTHLY AVERAGE NITRITE (NO_2-N) AND NITRATE (NO_3-N) CONCENTRATIONS OF THE EFFLUENT FROM SECOND AERATION CELL A2 IN ORANGE GROVE AERATED LAGOON SYSTEM

	C E L L A 2		
MONTH	NITRITE-NITROGEN (mg/l)	MONTHLY AVERAGE	NITRATE-NITROGEN (mg/l)
December '75	0.37		1.94
January	0.60		2.75
February	1.73		5.10
March	0.25		6.50
April	1.12		6.06
May	1.60		3.90
June	0.77		1.19
July	0.50		0.38
August	0.33		0.19
September	0.10		0.12
October	0.28		0.35
November '76	0.04		0.19
YEARLY MEAN	0.61		2.36

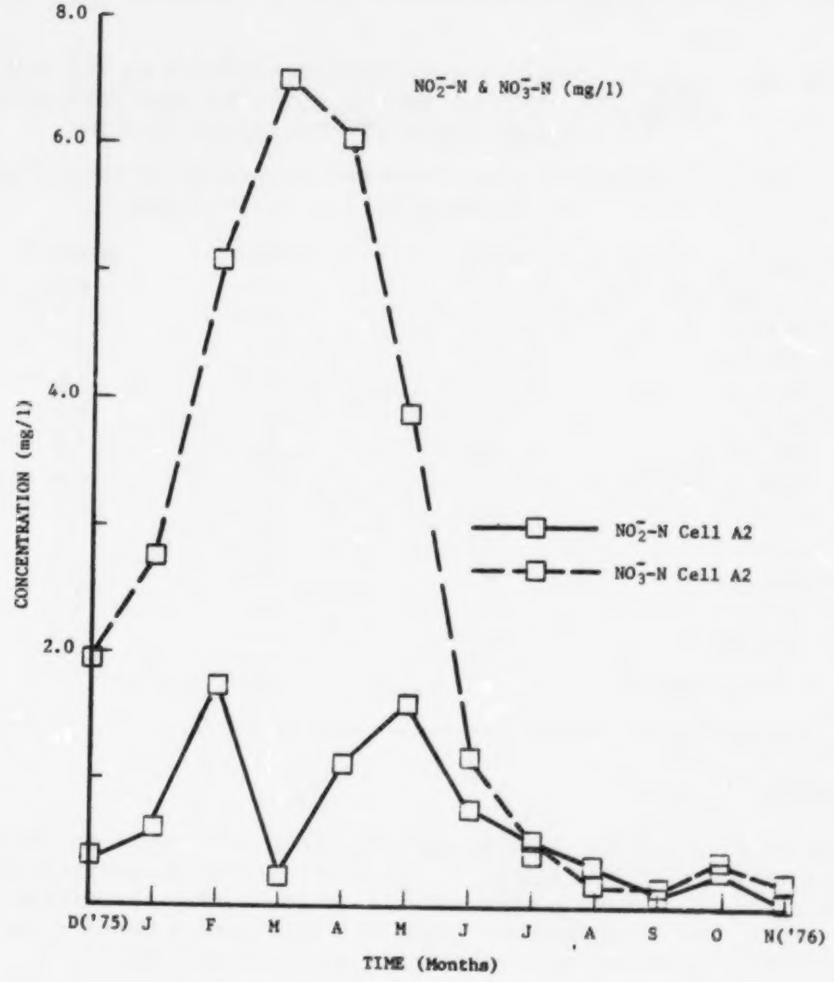


Figure 13. Monthly average nitrite and nitrate removals for the Orange Grove Lagoon System.

Total Phosphorus

Mean monthly total phosphorus concentrations, measured as P, recorded during the study period are presented in Table 26 and Figure 14. Influent concentrations ranged from a high of 12.4 mg/l in March to a low of 6.8 mg/l during July. The average yearly influent phosphorus concentration was reported as 9.1 mg/l. Approximately 15.4% of the total phosphorus was removed within the aeration cells with a total system removal of 30.8% being observed. The average effluent level was 7.5 mg/l. Removal efficiencies were relatively unaffected by seasonal variation. Removal is attributable to phosphorus assimilation by micro and macroorganisms within the treatment system.

TABLE 26. MONTHLY AVERAGE TOTAL PHOSPHORUS LEVELS OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM CELL A2 AND S2 IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Total phosphorus (mg/l) - monthly average		
MONTH	INFLUENT	CELL A2	EFFLUENT
December '75	7.7	6.3	6.1
January	8.2	6.9	6.9
February	9.5	7.9	7.7
March	12.4	7.7	7.6
April	11.1	7.3	6.9
May	9.9	8.9	8.5
June	9.3	7.5	7.2
July	6.8	6.8	6.7
August	7.9	8.2	7.3
September	9.5	9.1	8.4
October	9.6	8.9	9.1
November '76	10.3	9.3	10.0
YEARLY MEAN	9.1	7.7	7.5

FECAL COLIFORM

Study results for fecal coliform reductions are listed in Table 27 and graphically illustrated by Figure 15. Fecal coliform concentrations from Cell A2 prior to chlorination were relatively low during the winter period (December-March) and then increase rapidly. Only during January and February did S2 effluent counts indicate compliance with Federal and State standards of 200 colonies/100 ml. Non-compliance was due to low residual chlorine levels maintained.

As previously noted chlorination was affected prior to the final settling basin where residual chlorine was monitored. The actual average detention time during the study in Cell S2 was about five days. Hence maintaining a

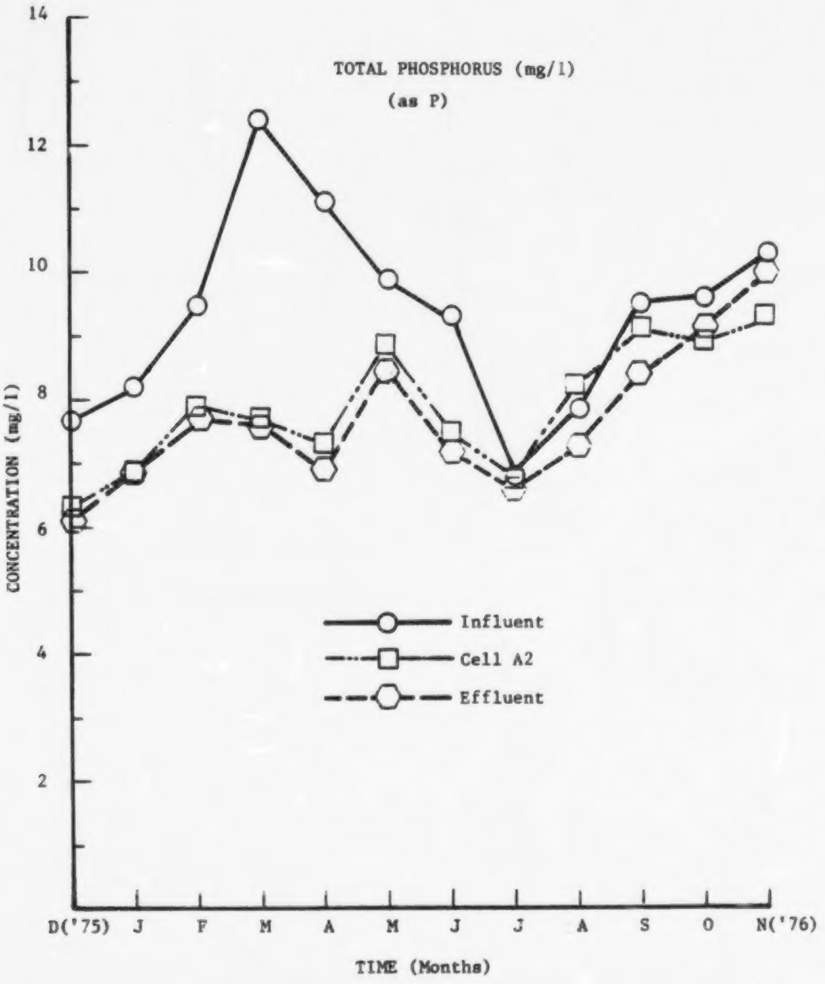


Figure 14. Monthly average total phosphorus removal for the Orange Grove Lagoon System.

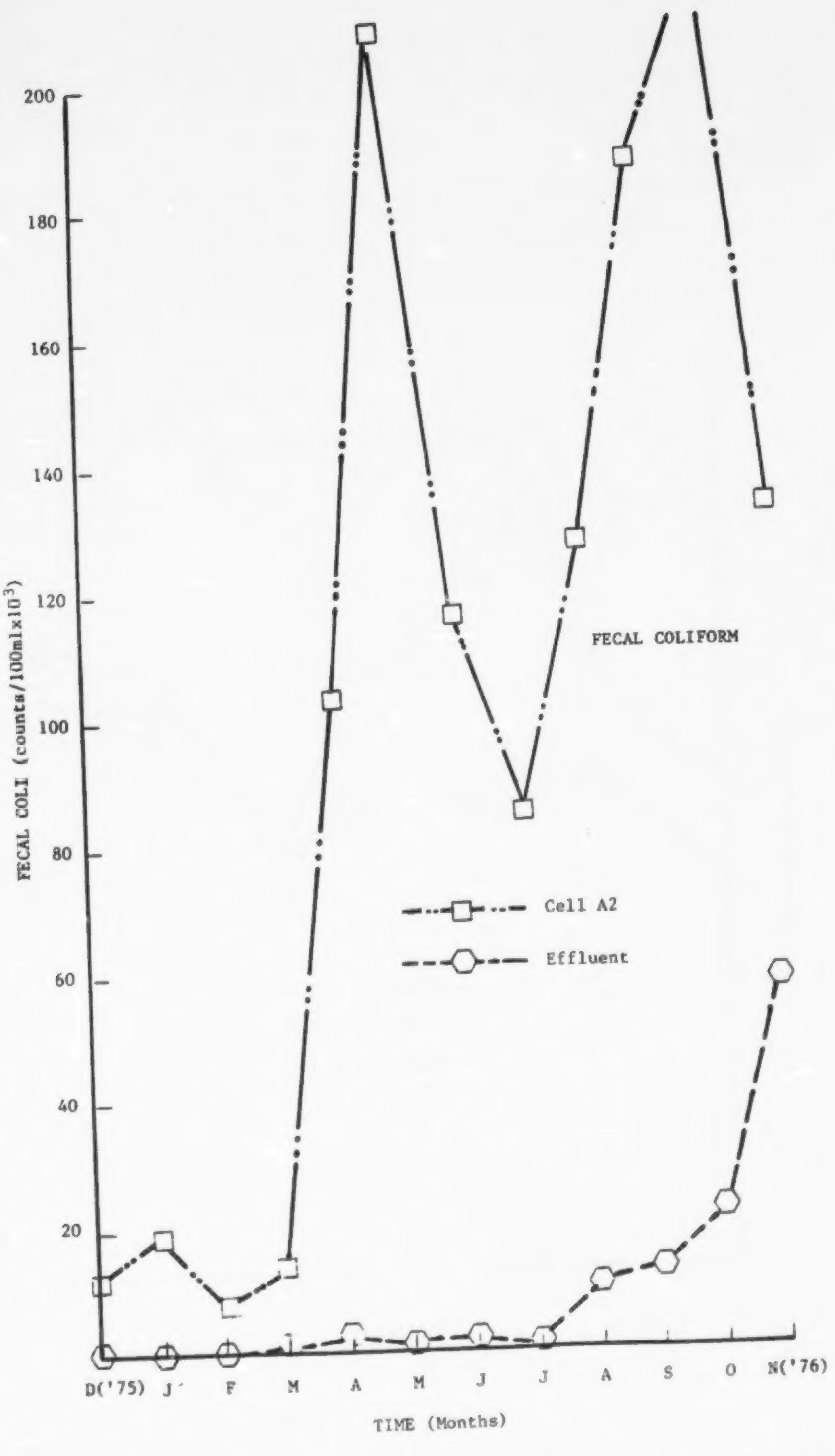


Figure 15. Monthly geometric mean fecal coliform removals for the Orange Grove Lagoon System.

high effluent residual was very difficult. Equipment malfunctions also contributed to these low residuals.

A more efficient chlorination chamber and reduced retention in Cell S2 along with better operational control should result in compliance to fecal coliform standards.

TABLE 27. MONTHLY GEOMETRIC MEAN FECAL COLIFORM COUNT (#/100 ml) OF THE EFFLUENT FROM CELLS A2 AND S2 IN THE ORANGE GROVE AERATED LAGOON SYSTEM

Fecal coliform concentration (#/100 ml) monthly geometric means

MONTH	CELL A2	FINAL EFFLUENT (S2)
December '75	12,120	509
January	18,708	169
February	7,838	122
March	13,828	1,223
April	103,288	2,930
May	209,690	2,457
June	116,130	2,687
July	84,979	947
August	127,382	10,782
September	189,332	12,506
October	221,537	21,638
November	133,219	58,744
YEARLY MEANS	101,030	6,725

ALGAE

Mean monthly algae cell counts for the effluents from each aeration basin and final settling cell are presented in Table 28 and Figure 16. As indicated the highest counts were recorded in the second aeration cell except during the months of October and November when greater counts were observed in Cell A1. Mean algae cell concentrations for A1, A2, and S2 were 155,600, 202,600, and 119,000 cells/ml respectively. The lower levels found in the effluent are due in part to chlorination prior to the final settling basin. No apparent seasonal trends were noted.

ALKALINITY

The average monthly alkalinity (as $CaCO_3$) of the raw wastewater influent and effluent from each cell is presented in Table 29 and Figure 17.

Alkalinity is a measure of the buffer capacity of a given water. It consists of carbonate, bicarbonate, and hydroxide components. The amount and forms present will be a function of bacterial and algae activity, pH, and the

TABLE 28. MONTHLY AVERAGE ALGAE CELL COUNT (#/ml X 10^3) OF THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

Algae cell count (#/ml X 10^3) - monthly average			
MONTH	CELL A1	CELL A2	EFFLUENT
December '75	8.47	79.33	58.08
January	63.33	174.33	116.83
February	56.00	149.00	110.00
March	69.70	170.90	130.00
April	275.33	418.33	201.83
May	59.09	133.00	89.00
June	53.00	83.00	73.00
July	117.77	135.95	81.50
August	118.00	203.00	96.40
September	215.67	219.25	142.85
October	356.00	94.00	18.00
November '76	312.00	120.00	93.00
YEARLY MEAN	155.60	202.60	119.00

TABLE 29. MONTHLY AVERAGE ALKALINITY (AS $CaCO_3$) CONTENT OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

Alkalinity (mg/l as $CaCO_3$) - monthly average				
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	142	124	98	87
January	133	121	96	93
February	132	129	53	66
March	154	134	74	58
April	147	133	78	75
May	153	147	106	102
June	131	93	99	102
July	118	85	96	96
August	138	85	101	105
September	147	124	128	123
October	156	104	142	136
November '76	173	129	147	141
YEARLY MEAN	140	117	101	98

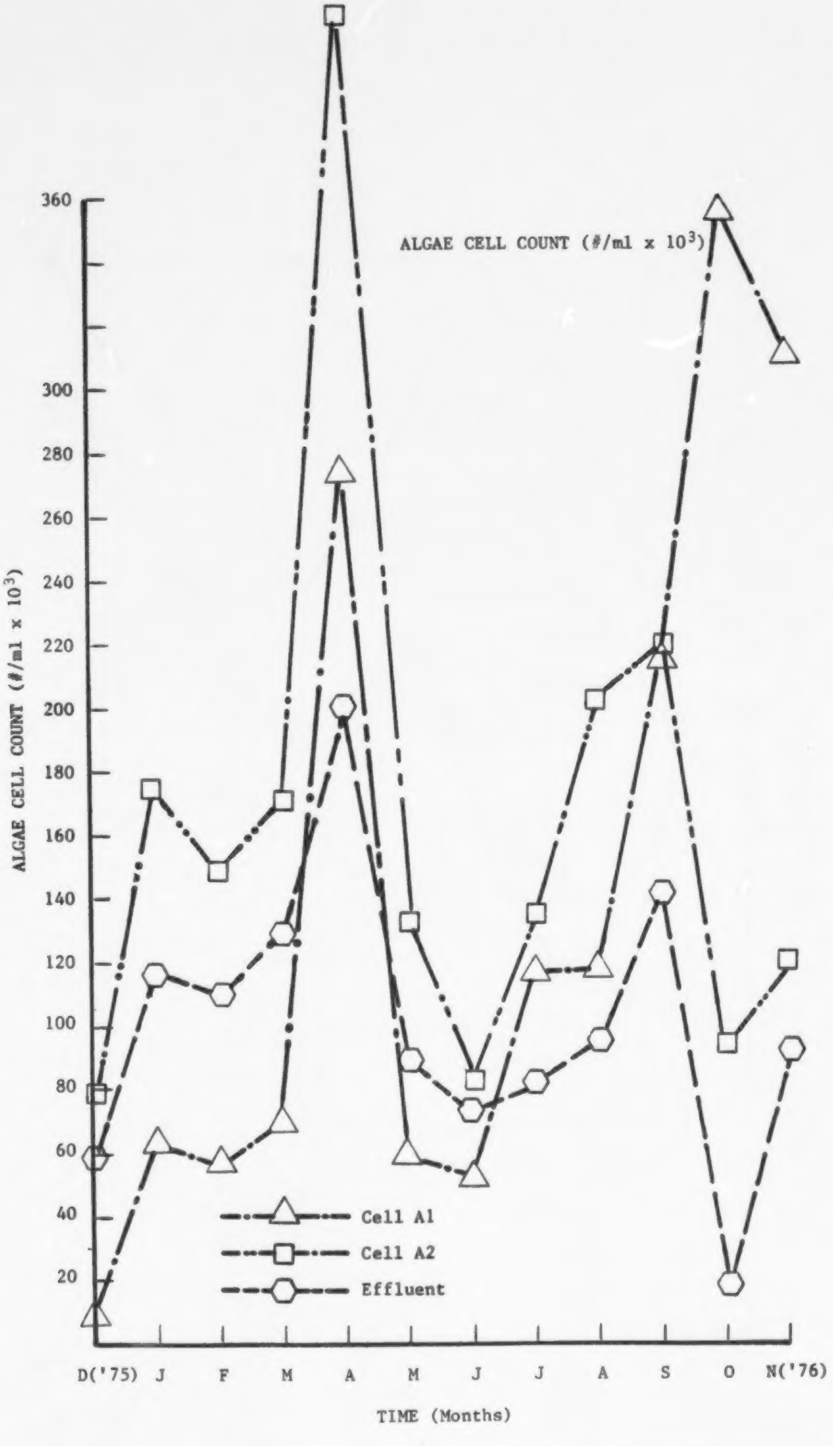


Figure 16. Monthly average algae cell count for the Orange Grove Lagoon System.

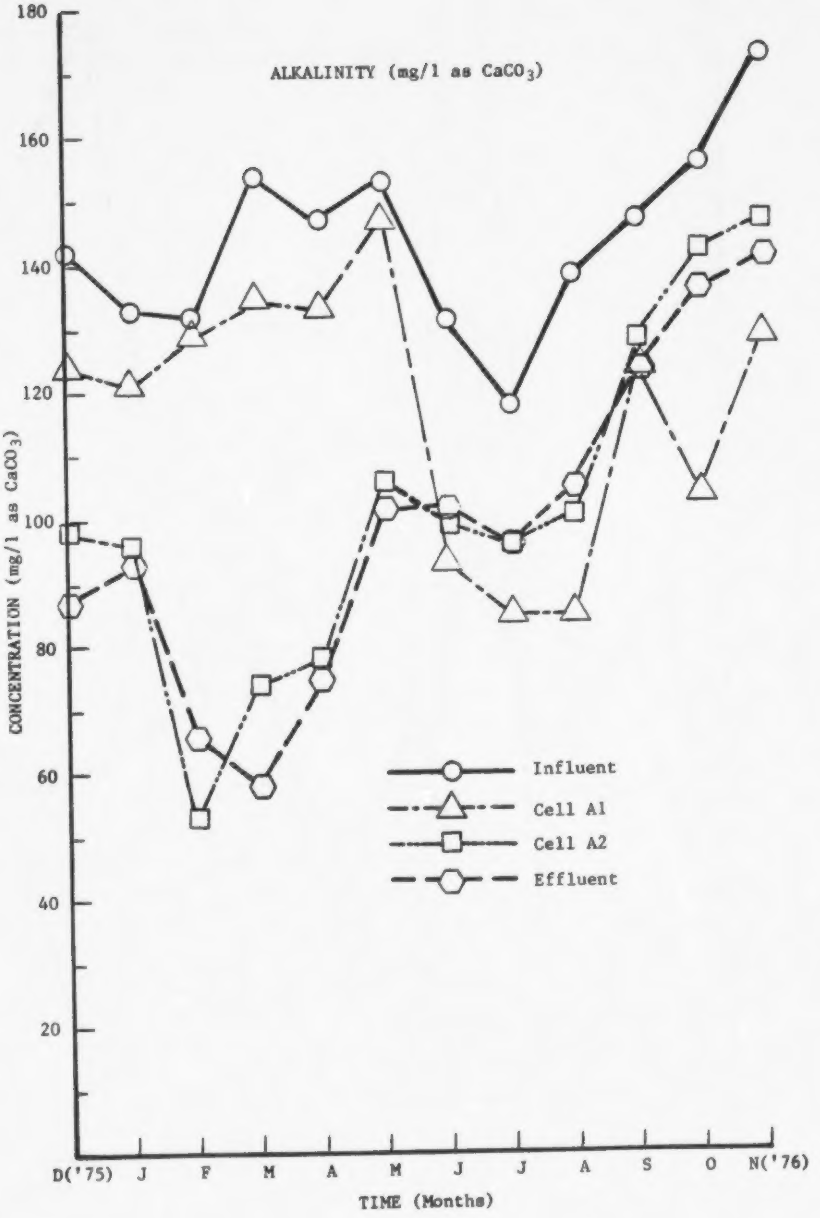


Figure 17. Monthly average alkalinity concentrations for the Orange Grove Lagoon System.

chemical composition of the sample. Mean concentrations observed for the Orange Grove Lagoon System were 140 mg/1, 117 mg/1, 101 mg/1 and 98 mg/1 as $CaCO_3$ for raw influent, A1 effluent, A2 effluent, and S2 effluent respectively. An overall average system alkalinity reduction of 30.1% was calculated from the collected data. Lowest values were observed during July through August for the first aeration cell where bacterial activity (and hence CO_2 production) was greatest. Alkalinity content was significantly reduced during the winter months in Cells A2 and S2. Commencing in July, an increasing trend in alkalinity content was noted for all cells which corresponded with raw influent observations.

TEMPERATURE, pH, AND DISSOLVED OXYGEN (DO)

Due to significant diurnal variations measurements of temperature, pH, and dissolved oxygen were made in situ. Values, therefore, reflect the time at which sampling was performed.

Temperature

The average monthly and yearly temperatures observed at each sampling location in the Orange Grove Lagoon System are reported in Table 30.

TABLE 30. MONTHLY AVERAGE TEMPERATURE OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Temperature °C - monthly averages			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	19.7	12.3	10.7	10.9
January	18.6	13.7	12.0	12.0
February	19.4	19.2	19.2	18.8
March	16.6	15.6	15.6	15.3
April	21.9	21.8	21.8	21.4
May	23.7	23.0	23.0	22.4
June	26.1	27.7	28.0	26.9
July	27.0	29.0	29.0	28.0
August	28.3	29.4	28.9	28.1
September	28.0	27.0	26.0	25.0
October	26.4	24.3	24.0	23.6
November '76	17.7	18.0	19.0	18.0
YEARLY MEAN	23.4	22.3	21.8	21.2

As expected the highest temperatures were observed during the summer months of July - September with the lowest being recorded during December and January. These winter months also experienced the greatest temperature drop through the treatment system (an 8.8°C loss). Average yearly temperature values were 23.4, 22.3, 21.8, and 21.2°C for the wastewater influent and effluents from Cell A1, A2, and S2, respectively. These results do not indicate a significant change through the system.

pH

Monthly medians and ranges of pH for the raw wastewater and cell effluents are given in Table 31. As indicated, little pH variation was observed between sampling locations. Seasonal trends were also negligible. The influent pH ranged from 6.8-7.5; whereas, the effluent ranged from 6.8-7.5. Thus, the system was in compliance with secondary standards of 6.5 to 9.0 and state limits of 6.0 to 7.8.

TABLE 31. MEDIAN AND RANGES OF pH VALUES OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	pH - monthly medians and ranges							
MONTH	INFLUENT		CELL A1		CELL A2		EFFLUENT	
	Median	Range	Median	Range	Median	Range	Median	Range
December '75	7.1	6.8-7.2	7.1	6.9-7.4	7.2	6.9-7.4	7.2	6.9-7.4
January	7.1	6.8-7.2	7.2	6.8-7.4	7.3	6.9-7.4	7.2	6.9-7.7
February	7.0	6.6-7.2	7.2	7.1-7.5	6.8	6.4-7.1	7.1	6.8-7.3
March	6.7	5.8-7.3	7.4	7.1-7.5	7.1	6.8-7.4	7.0	6.8-7.6
April	7.1	6.7-7.7	7.4	6.8-7.8	7.3	6.8-7.6	7.2	6.7-8.0
May	7.5	7.2-7.7	7.6	7.4-7.9	7.5	7.4-7.7	7.6	7.4-7.6
June	7.1	7.1-7.2	7.3	7.2-7.5	7.4	7.3-7.5	7.3	7.2-7.4
July	7.1	6.7-7.6	7.3	7.0-7.7	7.3	7.0-7.8	7.3	6.9-7.5
August	7.1	6.9-7.4	7.2	7.0-7.5	7.2	7.1-7.4	7.2	7.1-7.3
September	7.2	6.9-7.5	7.4	6.9-7.7	7.1	6.6-7.7	7.2	6.5-7.5
October	7.3	7.1-7.3	7.5	7.2-7.6	7.0	6.6-7.1	6.9	6.4-7.0
November '76	7.1	6.9-7.3	7.4	7.0-7.5	6.8	6.7-7.2	7.1	6.9-7.4

Dissolved Oxygen (DO)

The average monthly and yearly average DO concentration for the wastewater influent and lagoon contents are given in Table 32. Respective DO levels for influent and Cells A1, A2, and S2 were 0.6, 2.8, 3.8 and 2.8 mg/l. Influent DO was generally less than 1 mg/l as expected. Highest pond DO values occurred in December and January when temperatures and biological activity were lowest. The operation period of July - November was characterized by low lagoon DO contents (<2.5 mg/l) which resulted in inhibition to nitrification. This phenomena was particularily evident in the final aeration cell A2 and settling basin S2.

TABLE 32. MONTHLY AVERAGE DISSOLVED OXYGEN CONCENTRATION OF THE RAW WASTEWATER INFLUENT AND THE EFFLUENT FROM EACH CELL IN THE ORANGE GROVE AERATED LAGOON SYSTEM

	Dissolved oxygen (mg/l) - monthly average			
MONTH	INFLUENT	CELL A1	CELL A2	EFFLUENT
December '75	0.3	4.7	9.3	6.6
January	1.0	3.9	8.1	6.5
February	1.1	3.0	3.5	2.3
March	0.5	3.0	5.2	3.6
April	0.2	1.8	4.3	2.5
May	0.6	3.3	4.2	2.4
June	0.9	2.9	3.1	1.8
July	0.9	2.5	2.2	2.0
August	0.3	1.0	1.1	0.5
September	0.4	2.7	0.9	1.1
October	0.3	2.3	0.8	0.9
November '76	0.3	2.3	0.9	0.8
YEARLY MEAN	0.6	2.8	3.8	2.8

REFERENCES

1. Standard Methods for the Examination of Water and Wastewater, 13th Edition. American Public Health Association, New York, New York, 1971.

2. Methods for Chemical Analysis of Water and Wastes. EPA-625-/6-74-003a, 1974.

APPENDIX A. DAILY PERFORMANCE DATA FOR THE ORANGE GROVE LAGOON SYSTEM

ORANGE GROVE LAGOON DATA: December 20, 1975 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.292			0.315	
PEAK	MGD	0.856			0.452	
TOTAL	MGD	0.640			0.354	
TEMP.	°C	22	13	11	11	
pH		7.2	6.9	6.9	6.9	
D.O.	mg/1	0.0	4.8	9.4	6.8	
ALKALINITY (as $CaCO_3$)	mg/1	156	143	95	82	
TOTAL BOD_5	mg/1	149	45	40	29	
SOL. BOD_5	mg/1	83	24	23	10	
TOTAL COD	mg/1	715	93	60	55	
SOL.COD	mg/1	187	45	35	34	
TOTAL SS	mg/1	250	39	54	46	
VOL. SS	mg/1	196	36	50	39	
TOTAL NH_3 (as NH_3-N)	mg/1	13.2	11.4	7.1	7.4	
SOL. NH_3 (as NH_3-N)	mg/1	12.0	11.3	6.9	7.2	
TOTAL KN	mg/1	22.7	19.4	13.2	12.8	
SOL. KN	mg/1	19.0	15.7	11.0	10.5	
NO_2-N	mg/1			0.47		
NO_3-N	mg/1			1.83		
TOTAL-P	mg/1 P	8.70		6.88	5.80	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			6,800	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: December 21, 1975 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.321			0.320	
PEAK	MGD	0.820			0.460	
TOTAL	MGD	0.675			0.360	
TEMP.	°C	21	12	11	11	
pH		7.2	7.1	7.1	7.0	
D.O.	mg/l	0.0	5.0	9.2	6.8	
ALKALINITY (as $CaCO_3$)	mg/l	152	122	94	90	
TOTAL BOD_5	mg/l	134	45	38	24	
SOL.BOD_5	mg/l	78	20	19	14	
TOTAL COD	mg/l	766	117	81	74	
SOL.COD	mg/l	157	63	42	36	
TOTAL SS	mg/l	302	39	50	44	
VOL. SS	mg/l	194	30	48	43	
TOTAL NH_3 (as NH_3-N)	mg/l	15.7	11.5	8.3	7.6	
SOL. NH_3 (as NH_3-N)	mg/l	15.4	11.4	7.7	7.6	
TOTAL KN	mg/l	24.9	20.2	12.1	11.7	
SOL. KN	mg/l	22.1	16.5	9.3	9.1	
NO_2-N	mg/l			0.85		
NO_3-N	mg/l			1.66		
TOTAL-P	mg/l P	10.69		6.52	6.16	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			38,000	34,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: December 22, 1975 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.352			0.320	
PEAK	MGD	0.840			0.460	
TOTAL	MGD	0.695			0.380	
TEMP.	°C	20	12	10	10	
pH		6.9	7.1	7.2	7.2	
D.O.	mg/l	0.0	4.8	9.8	6.9	
ALKALINITY (as $CaCO_3$)	mg/l	176	125	97	93	
TOTAL BOD_5	mg/l	125	43	54	20	
SOL.BOD_5	mg/l	82	22	16	9	
TOTAL COD	mg/l	476	102	89	99	
SOL.COD	mg/l	130	64	35	33	
TOTAL SS	mg/l	211	41	54	49	
VOL. SS	mg/l	179	32	47	42	
TOTAL NH_3 (as NH_3-N)	mg/l	28.8	11.0	7.4	7.1	
SOL. NH_3 (as NH_3-N)	mg/l	25.5	11.0	6.5	6.9	
TOTAL KN	mg/l	38.9	19.9	12.3	11.5	
SOL. KN	mg/l	36.4	17.4	9.6	9.4	
NO_2-N	mg/l			0.26		
NO_3-N	mg/l			2.07		
TOTAL-P	mg/l P	8.70		6.34	6.88	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			12,000	4,900	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: December 23, 1975 Tuesday

PARAMETER	UNITS	L1	L2	L3	L4	F4
		SAMPLING POINT				
FLOW*						
MIN	MGD	0.312			0.330	
PEAK	MGD	0.910			0.510	
TOTAL	MGD	0.720			0.430	
TEMP.	°C	24	12	12	13	
pH		7.1	7.2	7.2	7.2	
D.O.	mg/1	0.1	5.5	9.6	5.4	
ALKALINITY (as $CaCO_3$)	mg/1	140	123	98	88	
TOTAL BOD_5	mg/1	208	50	65	31	
SOL.BOD_5	mg/1	109	33	31	20	
TOTAL COD	mg/1	379	102	81	78	
SOL.COD	mg/1	142	68	32	31	
TOTAL SS	mg/1	197	47	49	47	
VOL. SS	mg/1	161	38	47	47	
TOTAL NH_3 (as NH_3-N)	mg/1	20.7	11.4	7.4	7.2	
SOL. NH_3 (as NH_3-N)	mg/1	20.0	11.4	7.3	7.2	
TOTAL KN	mg/1	33.9	19.7	14.1	12.4	
SOL. KN	mg/1	31.6	16.6	10.0	9.5	
NO_2-N	mg/1			0.24		
NO_3-N	mg/1			1.93		
TOTAL-P	mg/1 P	6.52		6.16	5.80	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			7,700	2,300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: December 24, 1975 Wednesday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.320			0.320	
PEAK	MGD	0.810			0.510	
TOTAL	MGD	0.682			0.410	
TEMP.	°C	14	11	9	10	
pH		7.2	7.4	7.4	7.4	
D.O.	mg/l	0.1	4.2	9.6	7.4	
ALKALINITY (as $CaCO_3$)	mg/l	126	121	99	86	
TOTAL BOD_5	mg/l	179	52	60	22	
SOL.BOD_5	mg/l	95	33	31	11	
TOTAL COD	mg/l	508	108	99	106	
SOL.COD	mg/l	129	60	52	45	
TOTAL SS	mg/l	180	45	47	45	
VOL. SS	mg/l	155	40	44	45	
TOTAL NH_3 (as NH_3-N)	mg/l	19.6	12.6	7.2	7.4	
SOL. NH_3 (as NH_3-N)	mg/l	18.2	10.9	7.1	7.2	
TOTAL KN	mg/l	29.4	18.9	13.3	11.9	
SOL. KN	mg/l	26.0	15.5	9.2	8.2	
NO_2-N	mg/l			0.25		
NO_3-N	mg/l			1.88		
TOTAL-P	mg/l P	6.88		6.16	6.16	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			7,700	2,300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: December 25, 1975 Thursday

PARAMETER	UNITS	L1	L2	L3	L4	F4
		SAMPLING POINT				
FLOW*						
MIN	MGD	0.450			0.350	
PEAK	MGD	1.210			0.652	
TOTAL	MGD	0.935			0.450	
TEMP.	°C	19	13	11	11	
pH		6.8	7.1	7.4	7.4	
D.O.	mg/l	0.0	3.9	9.6	6.4	
ALKALINITY (as $CaCO_3$)	mg/l	110	126	104	84	
TOTAL BOD_5	mg/l	238	54	58	20	
SOL. BOD_5	mg/l	107	47	19	7	
TOTAL COD	mg/l	372	109	112	120	
SOL. COD	mg/l	133	65	60	46	
TOTAL SS	mg/l	211	28	34	32	
VOL. SS	mg/l	175	26	33	30	
TOTAL NH_3 (as NH_3-N)	mg/l	14.6	12.0	7.9	7.9	
SOL. NH_3 (as NH_3-N)	mg/l	14.3	11.4	7.7	7.7	
TOTAL KN	mg/l	24.4	19.4	12.8	11.1	
SOL. KN	mg/l	21.8	15.8	9.8	8.2	
NO_2-N	mg/l			0.25		
NO_3-N	mg/l			2.03		
TOTAL-P	mg/l P	6.96		5.89	5.89	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			11,000	<10	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: December 26, 1975 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.405			0.375	
PEAK	MGD	0.935			0.652	
TOTAL	MGD	0.810			0.460	
TEMP.	°C	18	13	11	10	
pH		7.1	7.4	7.2	7.2	
D.O.	mg/1	1.8	4.8	8.1	6.6	
ALKALINITY (as $CaCO_3$)	mg/1	134	107	102	89	
TOTAL BOD_5	mg/1	210	52	58	23	
SOL.BOD_5	mg/1	102	43	34	14	
TOTAL COD	mg/1	355	106	89	86	
SOL.COD	mg/1	132	58	40	28	
TOTAL SS	mg/1	211	28	34	32	
VOL. SS	mg/1	169	27	32	30	
TOTAL NH_3 (as NH_3-N)	mg/1	20.7	11.2	8.2	8.1	
SOL. NH_3 (as NH_3-N)	mg/1	19.6	11.2	7.8	7.9	
TOTAL KN	mg/1	33.6	18.0	13.6	13.2	
SOL. KN	mg/1	29.4	15.0	10.2	9.1	
NO_2-N	mg/1			0.24		
NO_3-N	mg/1			2.19		
TOTAL-P	mg/1 P	5.71		6.07	6.07	
CHLORINE RESIDUAL	mg/1				0.25	
FECAL COLIFORMS	#/100ml			19,000	<10	
ALGAE CELL CT.	#/ml		8,470	79,328	57,084	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 1, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.414			0.354	
PEAK	MGD	0.783			0.376	
TOTAL	MGD	0.618			0.373	
TEMP.	°C	19	16	14	14	
pH		6.8	6.8	7.0	7.2	
D.O.	mg/1	2.2	3.4	6.8	6.6	
ALKALINITY (as $CaCO_3$)	mg/1	114	112	112	102	
TOTAL BOD_5	mg/1	107	45	50	18	
SOL.BOD_5	mg/1	50	25	20	6	
TOTAL COD	mg/1	614	92	67	75	
SOL.COD	mg/1	92	60	22	43	
TOTAL SS	mg/1	164	29	37	27	
VOL. SS	mg/1	147	29	37	27	
TOTAL NH_3 (as NH_3-N)	mg/1	14.6	11.5	8.1	7.5	
SOL. NH_3 (as NH_3-N)	mg/1	12.6	11.5	7.8	7.3	
TOTAL KN	mg/1	23.2	17.6	13.4	12.9	
SOL. KN	mg/1	20.4	15.4	10.9	9.9	
NO_2-N	mg/1			0.11		
NO_3-N	mg/1			2.20		
TOTAL-P	mg/1 P	5.11		6.63	6.63	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			13,000	<10	
ALGAE CELL CT.	#/ml		69,000	252,000	126,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 2, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.640			0.252	
PEAK	MGD	1.048			0.354	
TOTAL	MGD	0.910			0.341	
TEMP.	^{o}C	19	16	15	15	
pH		7.2	7.4	7.4	7.7	
D.O.	mg/l	1.6	2.1	4.8	5.4	
ALKALINITY (as $CaCO_3$)	mg/l	112	110	102	97	
TOTAL BOD_5	mg/l	120	64	40	20	
SOL.BOD_5	mg/l	34	29	30	7	
TOTAL COD	mg/l	198	48	48	44	
SOL.COD	mg/l	71	45	40	32	
TOTAL SS	mg/l	194	36	46	42	
VOL. SS	mg/l	154	36	40	42	
TOTAL NH_3 (as NH_3-N)	mg/l	13.4	6.3	8.5	7.8	
SOL. NH_3 (as NH_3-N)	mg/l	11.8	6.2	8.3	7.6	
TOTAL KN	mg/l	27.7	20.4	15.9	13.1	
SOL. KN	mg/l	25.2	17.9	12.3	9.6	
NO_2-N	mg/l			0.44		
NO_3-N	mg/l			1.67		
TOTAL-P	mg/l P	5.51		6.07	6.34	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			26,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 3, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.702			0.314	
PEAK	MGD	1.039			0.357	
TOTAL	MGD	0.976			0.354	
TEMP.	°C	16	13	11	11	
pH		7.1	7.1	7.1	6.9	
D.O.	mg/l	0.8	2.8	5.4	5.8	
ALKALINITY (as $CaCO_3$)	mg/l	115	113	101	101	
TOTAL BOD_5	mg/l	150	60	55	24	
SOL.BOD_5	mg/l	80	48	25	23	
TOTAL COD	mg/l	369	98	84	78	
SOL.COD	mg/l	86	55	35	35	
TOTAL SS	mg/l	127	35	37	35	
VOL. SS	mg/l	103	35	37	35	
TOTAL NH_3 (as NH_3-N)	mg/l	11.8	11.2	8.1	7.7	
SOL. NH_3 (as NH_3-N)	mg/l	11.5	11.2	7.8	7.7	
TOTAL KN	mg/l	22.4	17.6	13.7	13.1	
SOL. KN	mg/l	20.7	14.6	10.4	10.3	
NO_2-N	mg/l			0.79		
NO_3-N	mg/l			1.93		
TOTAL-P	mg/l P	5.98		6.52	6.88	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			10,000	3,500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 4, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.542			0.213	
PEAK	MGD	0.967			0.315	
TOTAL	MGD	0.758			0.280	
TEMP.	°C	7	11	10	9	
pH		7.0	7.1	7.2	7.2	
D.O.	mg/l	3.8	3.2	8.1	4.8	
ALKALINITY (as $CaCO_3$)	mg/l	117	115	103	104	
TOTAL BOD_5	mg/l	149	51	53	22	
SOL. BOD_5	mg/l	70	29	12	11	
TOTAL COD	mg/l	383	94	68	87	
SOL. COD	mg/l	87	54	35	33	
TOTAL SS	mg/l	79	53	70	41	
VOL. SS	mg/l	60	53	70	41	
TOTAL NH_3 (as NH_3-N)	mg/l	12.9	11.5	8.1	7.7	
SOL. NH_3 (as NH_3-N)	mg/l	12.3	10.9	7.7	7.7	
TOTAL KN	mg/l	18.2	18.2	13.7	12.9	
SOL. KN	mg/l	16.8	14.8	10.6	10.5	
NO_2-N	mg/l			0.56		
NO_3-N	mg/l			1.56		
TOTAL-P	mg/l P	5.07		7.06	5.07	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			9,500	970	
ALGAE CELL CT.	#/ml		60,000	143,000	120,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 5, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT			
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.413			0.213	
PEAK	MGD	0.998			0.312	
TOTAL	MGD	0.535			0.265	
TEMP.	°C	15	12	11	12	
pH		6.9	7.0	7.2	7.2	
D.O.	mg/l	0.0	4.6	6.8	8.0	
ALKALINITY (as $CaCO_3$)	mg/l	135	117	101	99	
TOTAL BOD_5	mg/l	133	70	64	20	
SOL. BOD_5	mg/l	61	34	22	14	
TOTAL COD	mg/l	421	97	82	78	
SOL. COD	mg/l	130	54	38	35	
TOTAL SS	mg/l	178	26	26	28	
VOL. SS	mg/l	152	26	26	28	
TOTAL NH_3 (as NH_3-N)	mg/l	15.7	10.9	8.1	8.1	
SOL. NH_3 (as NH_3-N)	mg/l	14.3	10.9	8.0	8.1	
TOTAL KN	mg/l	23.2	17.9	13.4	12.7	
SOL. KN	mg/l	21.3	14.6	10.6	10.0	
NO_2-N	mg/l			0.67		
NO_3-N	mg/l			1.50		
TOTAL-P	mg/l P	7.07		7.97	7.79	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			45,000	<10	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 6, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.660			0.273	
PEAK	MGD	1.044			0.374	
TOTAL	MGD	0.849			0.324	
TEMP.	^{o}C	21	16	13	13	
pH		7.2	7.3	7.3	7.3	
D.O.	mg/l	0.0	4.6	7.8	6.4	
ALKALINITY (as $CaCO_3$)	mg/l	135	117	99	97	
TOTAL BOD_5	mg/l	199	68	57	27	
SOL.BOD_5	mg/l	117	49	37	20	
TOTAL COD	mg/l	358	103	86	84	
SOL.COD	mg/l	136	51	40	40	
TOTAL SS	mg/l	157	27	39	32	
VOL. SS	mg/l	128	21	30	25	
TOTAL NH_3 (as NH_3-N)	mg/l	19.3	11.5	8.5	8.0	
SOL. NH_3 (as NH_3-N)	mg/l	19.3	11.5	8.1	8.0	
TOTAL KN	mg/l	30.0	16.8	13.7	12.7	
SOL. KN	mg/l	27.2	13.4	10.1	10.5	
NO_2-N	mg/l			0.68		
NO_3-N	mg/l			1.53		
TOTAL-P	mg/l P	6.89		7.53	7.97	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			34,000	950	
ALGAE CELL CT.	#/ml		66,000	160,000	119,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 7, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.688			0.274	
PEAK	MGD	1.062			0.376	
TOTAL	MGD	0.871			0.311	
TEMP.	°C	19	13	11	11	
pH		6.9	6.9	6.9	6.9	
D.O.	mg/l	0.2	3.6	7.8	6.6	
ALKALINITY (as $CaCO_3$)	mg/l	114	116	96	95	
TOTAL BOD_5	mg/l	234	72	60	23	
SOL.BOD_5	mg/l	107	39	30	17	
TOTAL COD	mg/l	270	87	78	72	
SOL.COD	mg/l	126	48	33	32	
TOTAL SS	mg/l	223	38	36	37	
VOL. SS	mg/l	163	29	31	22	
TOTAL NH_3 (as NH_3-N)	mg/l	19.5	11.1	7.7	7.9	
SOL. NH_3 (as NH_3-N)	mg/l	19.2	10.9	7.5	7.7	
TOTAL KN	mg/l	21.3	19.0	14.0	13.3	
SOL. KN	mg/l	13.7	14.3	10.1	10.1	
NO_2-N	mg/l			0.71		
NO_3-N	mg/l			1.93		
TOTAL-P	mg/l P	8.61		8.88	8.52	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			2,600	85	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 8, 1976 THURSDAY

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.708			0.320	
PEAK	MGD	1.096			0.421	
TOTAL	MGD	0.991			0.370	
TEMP.	°C	18	12	11	11	
pH		6.9	7.1	7.2	7.1	
D.O.	mg/l	0.1	3.8	7.8	6.8	
ALKALINITY (as $CaCO_3$)	mg/l	143	113	96	95	
TOTAL BOD_5	mg/l	216	80	68	27	
SOL.BOD_5	mg/l	118	46	27	11	
TOTAL COD	mg/l	786	96	79	59	
SOL.COD	mg/l	138	50	35	33	
TOTAL SS	mg/l	400	31	38	37	
VOL. SS	mg/l	355	28	31	21	
TOTAL NH_3 (as NH_3-N)	mg/l	20.4	11.1	7.8	7.8	
SOL. NH_3 (as NH_3-N)	mg/l	18.5	10.8	7.6	7.8	
TOTAL KN	mg/l	44.5	18.8	15.1	13.3	
SOL. KN	mg/l	40.6	16.0	11.5	11.2	
NO_2-N	mg/l			0.57		
NO_3-N	mg/l			2.00		
TOTAL-P	mg/l P	8.46		7.60	7.97	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			53,000	400	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 9, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.979			0.351	
PEAK	MGD	1.113			0.374	
TOTAL	MGD	1.110			0.363	
TEMP.	°C	19	11	10	10	
pH		7.1	7.3	7.4	7.3	
D.O.	mg/l	0.5	4.6	9.2	6.5	
ALKALINITY (as $CaCO_3$)	mg/l	110	114	96	93	
TOTAL BOD_5	mg/l	134	60	59	20	
SOL.BOD_5	mg/l	75	39	30	18	
TOTAL COD	mg/l	429	89	84	70	
SOL.COD	mg/l	116	50	34	33	
TOTAL SS	mg/l	140	36	41	30	
VOL. SS	mg/l	87	36	34	24	
TOTAL NH_3 (as NH_3-N)	mg/l	18.5	13.3	8.6	8.7	
SOL. NH_3 (as NH_3-N)	mg/l	17.6	8.4	8.5	8.2	
TOTAL KN	mg/l	39.8	19.0	14.0	13.3	
SOL. KN	mg/l	35.3	15.7	13.3	11.8	
NO_2-N	mg/l			0.57		
NO_3-N	mg/l			1.93		
TOTAL-P	mg/l P	7.12		6.63	4.42	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			50,000	<10	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 10, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.613			0.351	
PEAK	MGD	0.975			0.432	
TOTAL	MGD	0.812			0.390	
TEMP.	°C	18	13	11	11	
pH		7.0	7.1	7.2	7.1	
D.O.	mg/l	2.6	5.3	9.6	7.4	
ALKALINITY (as $CaCO_3$)	mg/l	130	115	97	91	
TOTAL BOD_5	mg/l	233	75	62	25	
SOL.BOD_5	mg/l	130	46	26	12	
TOTAL COD	mg/l	330	111	90	69	
SOL.COD	mg/l	137	63	40	30	
TOTAL SS	mg/l	183	26	39	24	
VOL. SS	mg/l	155	20	31	24	
TOTAL NH_3 (as NH_3-N)	mg/l	19.9	11.2	7.9	7.8	
SOL. NH_3 (as NH_3-N)	mg/l	18.8	10.8	7.9	7.8	
TOTAL KN	mg/l	37.2	17.6	14.6	13.1	
SOL. KN	mg/l	33.3	15.1	11.2	10.6	
NO_2-N	mg/l			0.48		
NO_3-N	mg/l			1.27		
TOTAL-P	mg/l P	8.10		6.63	6.63	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			1,700	2,500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 11, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.640			0.315	
PEAK	MGD	1.089			0.395	
TOTAL	MGD	0.889			0.356	
TEMP.	°C	21	14	12	12	
pH		7.2	7.3	7.3	7.4	
D.O.	mg/1	0.0	4.2	9.4	6.2	
ALKALINITY (as $CaCO_3$)	mg/1	167	125	100	97	
TOTAL BOD_5	mg/1	185	64	41	27	
SOL.BOD_5	mg/1	92	30	26	19	
TOTAL COD	mg/1	427	134	77	60	
SOL.COD	mg/1	121	47	34	32	
TOTAL SS	mg/1	257	39	37	24	
VOL. SS	mg/1	215	33	30	21	
TOTAL NH_3 (as NH_3-N)	mg/1	25.2	11.2	7.9	7.8	
SOL. NH_3 (as NH_3-N)	mg/1	24.9	10.9	7.7	7.7	
TOTAL KN	mg/1	39.2	18.5	14.0	12.5	
SOL. KN	mg/1	36.7	15.4	10.9	10.6	
NO_2-N	mg/1			0.47		
NO_3-N	mg/1			1.93		
TOTAL-P	mg/1 P	10.07		5.77	6.63	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			2,300	4,900	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 12, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.752			0.351	
PEAK	MGD	0.930			0.432	
TOTAL	MGD	0.856			0.394	
TEMP.	^{o}C	21	15	13	13	
pH		6.8	7.2	7.2	7.4	
D.O.	mg/l	0.0	4.2	9.2	6.2	
ALKALINITY (as $CaCO_3$)	mg/l	130	121	96	96	
TOTAL BOD_5	mg/l	197	78	60	24	
SOL.BOD_5	mg/l	94	49	31	16	
TOTAL COD	mg/l	313	86	85	70	
SOL.COD	mg/l	107	52	35	34	
TOTAL SS	mg/l	263	35	38	24	
VOL. SS	mg/l	216	32	30	19	
TOTAL NH_3 (as NH_3-N)	mg/l	12.9	11.2	7.6	7.8	
SOL. NH_3 (as NH_3-N)	mg/l	12.9	11.1	7.3	7.8	
TOTAL KN	mg/l	19.3	17.3	14.0	13.1	
SOL. KN	mg/l	17.6	15.4	10.6	10.8	
NO_2-N	mg/l			0.57		
NO_3-N	mg/l			2.72		
TOTAL-P	mg/l P	7.98		6.66	7.50	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			73,000	240	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 13, 1976 TUESDAY

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.496			0.314	
PEAK	MGD	1.062			0.423	
TOTAL	MGD	0.785			0.369	
TEMP.	°C	21	16	15	15	
pH		6.9	7.2	7.2	7.1	
D.O.	mg/l	0.0	3.4	9.2	6.0	
ALKALINITY (as $CaCO_3$)	mg/l	131	119	95	93	
TOTAL BOD_5	mg/l	228	66	58	26	
SOL. BOD_5	mg/l	110	31	22	15	
TOTAL COD	mg/l	776	76	66	63	
SOL. COD	mg/l	116	50	34	32	
TOTAL SS	mg/l	437	55	38	32	
VOL. SS	mg/l	368	49	26	20	
TOTAL NH_3 (as NH_3-N)	mg/l	15.4	11.5	7.6	7.8	
SOL. NH_3 (as NH_3-N)	mg/l	15.1	11.3	7.4	7.8	
TOTAL KN	mg/l	26.6	18.8	14.6	13.1	
SOL. KN	mg/l	23.5	15.7	11.5	12.7	
NO_2-N	mg/l			0.57		
NO_3-N	mg/l			2.72		
TOTAL-P	mg/l P	11.90		6.40	7.10	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			74,000	330	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JANUARY 14, 1976 WEDNESDAY

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.567			0.315	
PEAK	MGD	0.819			0.354	
TOTAL	MGD	0.718			0.335	
TEMP.	°C	20	15	14	14	
pH		7.1	7.3	7.3	7.2	
D.O.	mg/l	0.2	3.8	9.4	6.2	
ALKALINITY (as $CaCO_3$)	mg/l	145	117	101	97	
TOTAL BOD_5	mg/l	240	60	69	21	
SOL.BOD_5	mg/l	60	49	42	14	
TOTAL COD	mg/l	299	84	81	70	
SOL.COD	mg/l	104	57	56	40	
TOTAL SS	mg/l	236	37	38	27	
VOL. SS	mg/l	195	31	27	19	
TOTAL NH_3 (as NH_3-N)	mg/l	21.6	13.4	7.8	8.5	
SOL. NH_3 (as NH_3-N)	mg/l	20.4	12.5	7.4	8.4	
TOTAL KN	mg/l	40.3	19.6	13.4	12.6	
SOL. KN	mg/l	33.6	17.4	10.3	10.6	
NO_2-N	mg/l			0.60		
NO_3-N	mg/l			1.92		
TOTAL-P	mg/l P	7.74		7.02	6.78	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			68,000	530	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 15, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.600			0.294	
PEAK	MGD	0.760			0.332	
TOTAL	MGD	0.718			0.308	
TEMP.	°C	21	16	15	15	
pH		7.2	7.4	7.4	7.2	
D.O.	mg/l	0.0	3.5	9.0	5.8	
ALKALINITY (as $CaCO_3$)	mg/l	135	124	90	95	
TOTAL BOD_5	mg/l	262	59	59	28	
SOL.BOD_5	mg/l	91	39	37	9	
TOTAL COD	mg/l	779	101	76	73	
SOL.COD	mg/l	128	66	39	38	
TOTAL SS	mg/l	72	33	37	25	
VOL. SS	mg/l	49	25	26	15	
TOTAL NH_3 (as NH_3-N)	mg/l	15.4	11.8	6.9	8.0	
SOL. NH_3 (as NH_3-N)	mg/l	15.4	11.5	6.9	8.0	
TOTAL KN	mg/l	23.5	19.0	13.2	12.7	
SOL. KN	mg/l	21.3	17.0	10.1	10.6	
NO_2-N	mg/l			0.52		
NO_3-N	mg/l			2.52		
TOTAL-P	mg/l P	11.67		6.43	6.43	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			78,000	140	
ALGAE CELL CT.	#/ml		65,000	171,000	111,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 16, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.625			0.319	
PEAK	MGD	0.844			0.333	
TOTAL	MGD	0.818			0.326	
TEMP.	^oC	19	14	13	13	
pH		7.0	7.2	7.1	7.2	
D.O.	mg/l	0.0	4.2	6.8	6.0	
ALKALINITY (as $CaCO_3$)	mg/l	112	94	91	88	
TOTAL BOD_5	mg/l	312	86	85	27	
SOL.BOD_5	mg/l	85	59	49	16	
TOTAL COD	mg/l	639	112	110	75	
SOL.COD	mg/l	123	69	68	38	
TOTAL SS	mg/l	448	33	40	77	
VOL. SS	mg/l	304	31	30	41	
TOTAL NH_3 (as NH_3-N)	mg/l	15.1	11.8	6.6	7.7	
SOL. NH_3 (as NH_3-N)	mg/l	14.8	11.6	6.5	7.7	
TOTAL KN	mg/l	25.2	19.0	12.9	12.5	
SOL. KN	mg/l	20.7	16.0	9.5	10.5	
NO_2-N	mg/l			0.47		
NO_3-N	mg/l			2.52		
TOTAL-P	mg/l P	10.48		6.43	6.43	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			27,000	<10	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 17, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.618			0.316	
PEAK	MGD	0.925			0.329	
TOTAL	MGD	0.856			0.323	
TEMP.	°C	21	15	14	13	
pH		7.2	7.2	7.2	7.2	
D.O.	mg/l	0.0	4.6	6.9	6.5	
ALKALINITY (as $CaCO_3$)	mg/l	203	129	92	93	
TOTAL BOD_5	mg/l	220	43	42	29	
SOL.BOD_5	mg/l	82	30	25	18	
TOTAL COD	mg/l	498	65	69	36	
SOL.COD	mg/l	145	36	47	32	
TOTAL SS	mg/l	416	27	33	26	
VOL. SS	mg/l	369	25	24	24	
TOTAL NH_3 (as NH_3-N)	mg/l	28.3	12.2	6.9	7.8	
SOL. NH_3 (as NH_3-N)	mg/l	28.3	12.0	6.7	7.8	
TOTAL KN	mg/l	49.3	19.9	13.4	12.7	
SOL. KN	mg/l	45.9	16.8	10.1	10.8	
NO_2-N	mg/l			0.53		
NO_3-N	mg/l			3.64		
TOTAL-P	mg/l P	12.86		6.49	6.49	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			23,000	6,100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 18, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.603			0.315	
PEAK	MGD	1.030			0.332	
TOTAL	MGD	0.875			0.325	
TEMP.	°C	20	14	13	13	
pH		7.2	7.2	7.2	7.1	
D.O.	mg/l	0.0	5.0	6.9	6.2	
ALKALINITY (as $CaCO_3$)	mg/l	206	130	94	94	
TOTAL BOD_5	mg/l	202	43	61	29	
SOL. BOD_5	mg/l	154	38	31	20	
TOTAL COD	mg/l	568	100	91	69	
SOL. COD	mg/l	208	58	36	39	
TOTAL SS	mg/l	209	45	41	25	
VOL. SS	mg/l	184	39	32	21	
TOTAL NH_3 (as NH_3-N)	mg/l	23.2	12.0	6.3	7.4	
SOL. NH_3 (as NH_3-N)	mg/l	22.7	11.9	6.3	7.4	
TOTAL KN	mg/l	40.9	19.6	13.2	12.7	
SOL. KN	mg/l	37.2	16.5	10.1	10.5	
NO_2-N	mg/l			0.56		
NO_3-N	mg/l			3.03		
TOTAL-P	mg/l P	13.92		7.09	6.84	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			15,000	4,400	
ALGAE CELL CT.	#/ml		59,000	159,000	109,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 19, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.615			0.315	
PEAK	MGD	1.016			0.332	
TOTAL	MGD	0.872			0.324	
TEMP.	^oC	18	12	11	11	
pH		7.1	7.2	7.3	7.2	
D.O.	mg/1	1.8	5.4	8.8	7.8	
ALKALINITY (as $CaCO_3$)	mg/1	140	129	93	93	
TOTAL BOD_5	mg/1	161	63	53	34	
SOL.BOD_5	mg/1	76	37	36	23	
TOTAL COD	mg/1	257	115	89	80	
SOL.COD	mg/1	137	67	53	49	
TOTAL SS	mg/1	283	33	40	23	
VOL. SS	mg/1	251	31	36	23	
TOTAL NH_3 (as NH_3-N)	mg/1	14.3	11.8	6.5	7.3	
SOL. NH_3 (as NH_3-N)	mg/1	14.0	11.5	6.4	7.2	
TOTAL KN	mg/1	21.8	19.9	13.4	12.1	
SOL. KN	mg/1	19.6	16.2	10.1	9.9	
NO_2-N	mg/1			0.62		
NO_3-N	mg/1			3.03		
TOTAL-P	mg/1 P	9.20		7.09	7.34	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			43,000	380	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 20, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.612			0.297	
PEAK	MGD	0.928			0.319	
TOTAL	MGD	0.860			0.308	
TEMP.	°C	19	15	11	10	
pH		7.2	7.3	7.4	7.3	
D.O.	mg/l	1.6	3.6	8.6	7.6	
ALKALINITY (as $CaCO_3$)	mg/l	124	128	95	92	
TOTAL BOD_5	mg/l	168	64	71	38	
SOL.BOD_5	mg/l	64	45	35	21	
TOTAL COD	mg/l	320	95	93	66	
SOL.COD	mg/l	102	59	75	43	
TOTAL SS	mg/l	322	31	37	24	
VOL. SS	mg/l	286	30	34	23	
TOTAL NH_3 (as NH_3-N)	mg/l	12.3	11.6	6.3	7.1	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	11.3	6.3	7.1	
TOTAL KN	mg/l	19.3	19.3	13.2	12.5	
SOL. KN	mg/l	16.8	16.8	10.1	10.5	
NO_2-N	mg/l			0.65		
NO_3-N	mg/l			2.46		
TOTAL-P	mg/l P	5.17		5.37	5.27	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			43,000	60	
ALGAE CELL CT.	#/ml		60,000	161,000	116,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 21, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.612			0.297	
PEAK	MGD	0.940			0.317	
TOTAL	MGD	0.872			0.305	
TEMP.	°C	18	12	10	10	
pH		7.2	7.4	7.4	7.3	
D.O.	mg/l	3.2	4.6	9.2	6.4	
ALKALINITY (as $CaCO_3$)	mg/l	142	128	92	92	
TOTAL BOD_5	mg/l	360	43	65	31	
SOL.BOD_5	mg/l	81	26	24	19	
TOTAL COD	mg/l	398	108	92	75	
SOL.COD	mg/l	199	57	48	43	
TOTAL SS	mg/l	432	36	45	28	
VOL. SS	mg/l	349	31	36	24	
TOTAL NH_3 (as NH_3-N)	mg/l	15.7	11.8	6.1	6.9	
SOL. NH_3 (as NH_3-N)	mg/l	14.8	11.6	6.0	6.8	
TOTAL KN	mg/l	27.2	19.6	12.9	11.9	
SOL. KN	mg/l	24.9	16.8	9.8	10.3	
NO_2-N	mg/l			0.63		
NO_3-N	mg/l			1.56		
TOTAL-P	mg/l P	5.67		5.37	6.46	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			47,000	40	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 22, 1976 Thursday

Parameter	Units	L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.562			0.297	
PEAK	MGD	0.807			0.319	
TOTAL	MGD	0.734			0.308	
TEMP.	°C	20	12	11	11	
pH		7.1	7.4	7.3	7.2	
D.O.	mg/l	0.0	4.7	9.0	6.5	
ALKALINITY (as $CaCO_3$)	mg/l	117	132	91	91	
TOTAL BOD_5	mg/l	202	63	58	28	
SOL. BOD_5	mg/l	80	46	30	22	
TOTAL COD	mg/l	520	101	88	65	
SOL. COD	mg/l	83	59	35	45	
TOTAL SS	mg/l	442	36	48	28	
VOL. SS	mg/l	317	31	41	24	
TOTAL NH_3 (as NH_3-N)	mg/l	14.0	11.6	5.9	6.7	
SOL. NH_3 (as NH_3-N)	mg/l	13.7	11.5	5.9	6.7	
TOTAL KN	mg/l	31.5	20.3	14.2	12.5	
SOL. KN	mg/l	22.5	17.5	11.4	10.2	
NO_2-N	mg/l			0.61		
NO_3-N	mg/l			5.66		
TOTAL-P	mg/l P	5.21		6.90	6.84	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			23,000	60	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 23, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.689			0.297	
PEAK	MGD	0.827			0.322	
TOTAL	MGD	0.767			0.311	
TEMP.	°C	21	13	11	11	
pH		7.1	7.4	7.4	7.3	
D.O.	mg/1	0.0	4.4	8.8	6.6	
ALKALINITY (as $CaCO_3$)	mg/1	121	130	98	94	
TOTAL BOD_5	mg/1	204	53	61	24	
SOL.BOD_5	mg/1	91	38	36	10	
TOTAL COD	mg/1	556	103	79	68	
SOL.COD	mg/1	145	56	42	40	
TOTAL SS	mg/1	424	40	39	33	
VOL. SS	mg/1	306	37	37	24	
TOTAL NH_3 (as NH_3-N)	mg/1	14.8	12.3	6.6	6.8	
SOL. NH_3 (as NH_3-N)	mg/1	14.3	12.1	6.2	6.7	
TOTAL KN	mg/1	36.1	21.0	15.4	13.1	
SOL. KN	mg/1	20.7	18.2	12.9	10.1	
NO_2-N	mg/1			0.56		
NO_3-N	mg/1			6.66		
TOTAL-P	mg/1 P	6.25		6.58	6.51	
CHLORINE RESIDUAL	mg/1				0.1	
FECAL COLIFORMS	#/100ml			40,000	<10	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 24, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.624			0.299	
PEAK	MGD	0.951			0.321	
TOTAL	MGD	0.840			0.313	
TEMP.	°C	19	15	13	14	
pH		7.2	7.4	7.3	7.3	
D.O.	mg/l	0.2	4.8	8.2	7.0	
ALKALINITY (as $CaCO_3$)	mg/l	175	130	107	90	
TOTAL BOD_5	mg/l	303	49	64	26	
SOL.BOD_5	mg/l	142	40	40	15	
TOTAL COD	mg/l	476	96	81	81	
SOL.COD	mg/l	193	59	43	43	
TOTAL SS	mg/l	201	35	48	31	
VOL. SS	mg/l	175	35	38	26	
TOTAL NH_3 (as NH_3-N)	mg/l	23.0	11.9	5.6	6.4	
SOL. NH_3 (as NH_3-N)	mg/l	22.4	11.8	5.6	6.2	
TOTAL KN	mg/l	44.8	19.6	13.2	11.8	
SOL. KN	mg/l	38.1	16.5	12.3	9.7	
NO_2-N	mg/l			0.39		
NO_3-N	mg/l			5.34		
TOTAL-P	mg/l P	11.72		6.90	6.89	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			28,000	180	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 25, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.534			0.297	
PEAK	MGD	0.923			0.319	
TOTAL	MGD	0.818			0.308	
TEMP.	^oC	19	14	13	12	
pH		7.0	7.3	7.3	7.2	
D.O.	mg/l	3.2	2.4	7.8	5.6	
ALKALINITY (as $CaCO_3$)	mg/l	128	132	94	90	
TOTAL BOD_5	mg/l	166	68	61	38	
SOL.BOD_5	mg/l	79	60	38	32	
TOTAL COD	mg/l	425	96	95	74	
SOL.COD	mg/l	90	64	40	41	
TOTAL SS	mg/l	319	32	56	30	
VOL. SS	mg/l	261	30	44	27	
TOTAL NH_3 (as NH_3-N)	mg/l	16.8	11.8	6.2	6.2	
SOL. NH_3 (as NH_3-N)	mg/l	16.2	11.8	6.1	6.2	
TOTAL KN	mg/l	28.3	19.9	13.2	11.6	
SOL. KN	mg/l	25.2	16.8	9.2	9.1	
NO_2-N	mg/l			0.77		
NO_3-N	mg/l			2.78		
TOTAL-P	mg/l P	5.56		7.01	6.89	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			5,300	65	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 26, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.667			0.319	
PEAK	MGD	0.890			0.328	
TOTAL	MGD	0.831			0.322	
TEMP.	°C	19	14	13	12	
pH		7.1	7.2	7.3	7.3	
D.O.	mg/l	3.2	2.4	7.8	5.6	
ALKALINITY (as $CaCO_3$)	mg/l	119	130	89	85	
TOTAL BOD_5	mg/l	260	94	63	27	
SOL.BOD_5	mg/l	90	45	30	12	
TOTAL COD	mg/l	660	111	85	80	
SOL.COD	mg/l	96	66	39	39	
TOTAL SS	mg/l	714	44	53	40	
VOL. SS	mg/l	508	40	48	29	
TOTAL NH_3 (as NH_3-N)	mg/l	12.6	11.9	5.4	6.2	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	11.8	5.3	6.1	
TOTAL KN	mg/l	24.1	20.0	12.0	11.0	
SOL. KN	mg/l	22.0	16.0	8.1	9.0	
NO_2-N	mg/l			0.92		
NO_3-N	mg/l			3.26		
TOTAL-P	mg/l P	10.28		8.22	9.00	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			1,200	280	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 27, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.949			0.321	
PEAK	MGD	1.119			0.328	
TOTAL	MGD	1.088			0.325	
TEMP.	^oC	18	13	11	10	
pH		7.0	7.2	7.4	7.4	
D.O.	mg/l	0.8	2.8	7.2	6.8	
ALKALINITY (as $CaCO_3$)	mg/l	116	126	89	86	
TOTAL BOD_5	mg/l	396	62	49	24	
SOL. BOD_5	mg/l	78	40	35	19	
TOTAL COD	mg/l	516	79	76	62	
SOL.COD	mg/l	84	54	46	35	
TOTAL SS	mg/l	682	43	50	35	
VOL. SS	mg/l	476	40	42	25	
TOTAL NH_3 (as NH_3-N)	mg/l	12.3	12.0	5.7	6.1	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	11.5	5.0	5.9	
TOTAL KN	mg/l	17.4	19.6	12.0	11.4	
SOL. KN	mg/l	16.5	16.2	8.4	9.1	
NO_2-N	mg/l			0.67		
NO_3-N	mg/l			2.73		
TOTAL-P	mg/l P	9.65		7.57	6.78	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			17,000	90	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 28, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.949			0.319	
PEAK	MGD	1.119			0.327	
TOTAL	MGD	1.102			0.325	
TEMP.	^{o}C	17	13	11	10	
pH		7.1	7.2	7.3	7.3	
D.O.	mg/1	1.6	3.4	8.2	7.8	
ALKALINITY (as $CaCO_3$)	mg/1	118	128	90	89	
TOTAL BOD_5	mg/1	167	40	55	28	
SOL.BOD_5	mg/1	60	35	42	19	
TOTAL COD	mg/1	358	100	88	76	
SOL.COD	mg/1	90	55	34	42	
TOTAL SS	mg/1	162	42	58.5	42	
VOL. SS	mg/1	141	40	49.5	30	
TOTAL NH_3 (as NH_3-N)	mg/1	12.0	11.5	5.4	5.9	
SOL. NH_3 (as NH_3-N)	mg/1	12.0	11.3	5.4	5.9	
TOTAL KN	mg/1	24.1	20.4	13.2	11.3	
SOL. KN	mg/1	22.4	16.5	7.8	9.1	
NO_2-N	mg/1			0.74		
NO_3-N	mg/1			3.27		
TOTAL-P	mg/1 P	6.48		7.67	6.75	
CHLORINE RESIDUAL	mg/1				0.1	
FECAL COLIFORMS	#/100ml			11,000	70	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 29, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.949			0.319	
PEAK	MGD	1.119			0.327	
TOTAL	MGD	1.102			0.325	
TEMP.	°C	19	12	11	10	
pH		7.0	7.3	7.4	7.5	
D.O.	mg/l	0.4	4.4	8.8	6.2	
ALKALINITY (as $CaCO_3$)	mg/l	120	125	87	86	
TOTAL BOD_5	mg/l	304	70	52	25	
SOL.BOD_5	mg/l	104	48	38	12	
TOTAL COD	mg/l	437	102	97	87	
SOL.COD	mg/l	106	59	50	58	
TOTAL SS	mg/l	342	44	58	32	
VOL. SS	mg/l	257	38	49	27	
TOTAL NH_3 (as NH_3-N)	mg/l	12.0	11.5	5.5	6.0	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	11.5	5.2	5.8	
TOTAL KN	mg/l	26.0	19.3	12.9	11.8	
SOL. KN	mg/l	18.8	15.7	8.4	9.0	
NO_2-N	mg/l			0.74		
NO_3-N	mg/l			3.08		
TOTAL-P	mg/l P	9.87		8.59	8.08	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			14,000	140	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: January 30, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.918			0.316	
PEAK	MGD	1.113			0.325	
TOTAL	MGD	1.000			0.322	
TEMP.	°C	17	13	12	11	
pH		7.2	7.3	7.3	7.5	
D.O.	mg/l	2.0	3.8	8.6	7.8	
ALKALINITY (as $CaCO_3$)	mg/l	121	125	85	84.0	
TOTAL BOD_5	mg/l	208	73	76	27	
SOL.BOD_5	mg/l	90	48	30	12	
TOTAL COD	mg/l	342	88	84	72	
SOL.COD	mg/l	97	52	36	40	
TOTAL SS	mg/l	229	39	55	34	
VOL. SS	mg/l	177	37	45	31	
TOTAL NH_3 (as NH_3-N)	mg/l	11.2	10.4	5.3	6.0	
SOL. NH_3 (as NH_3-N)	mg/l	11.2	10.4	5.2	6.0	
TOTAL KN	mg/l	19.9	19.6	12.6	11.6	
SOL. KN	mg/l	16.0	14.6	7.3	8.6	
NO_2-N	mg/l			0.79		
NO_3-N	mg/l			4.04		
TOTAL-P	mg/l P	7.69		7.05	7.44	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			11,000	20	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 15, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.230			0.151	0.455
PEAK	MGD	0.562			0.151	0.486
TOTAL	MGD	0.488			0.151	0.475
TEMP.	^{o}C	20	19	19	18	
pH		6.7	7.3	6.7	7.0	
D.O.	mg/1	1.6	4.4	5.6	4.8	
ALKALINITY (as $CaCO_3$)	mg/1	129	116	112	70	
TOTAL BOD_5	mg/1	205	65	76	18	
SOL.BOD_5	mg/1	100	48	38	14	
TOTAL COD	mg/1	421	108	104	74	
SOL.COD	mg/1	126	58	50	46	
TOTAL SS	mg/1	259	41	50	30	
VOL. SS	mg/1	216	40	44	30	
TOTAL NH_3 (as NH_3-N)	mg/1	13.2	11.1	2.7	3.7	
SOL. NH_3 (as NH_3-N)	mg/1	13.2	10.8	2.7	3.7	
TOTAL KN	mg/1	24.1	19.0	10.1	9.1	
SOL. KN	mg/1	18.8	15.4	5.6	7.1	
NO_2-N	mg/1			1.98		
NO_3-N	mg/1			3.0		
TOTAL-P	mg/1 P	10.1		9.2	6.9	
CHLORINE RESIDUAL	mg/1				0.2	
FECAL COLIFORMS	#/100ml			15,700	140	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 16, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.494			0.194	0.255
PEAK	MGD	0.640			0.194	0.586
TOTAL	MGD	0.600			0.194	0.564
TEMP.	°C	19	19	19	19	
pH		6.8	7.2	6.8	7.2	
D.O.	mg/l	1.0	2.8	3.0	3.0	
ALKALINITY (as $CaCO_3$)	mg/l	135	124	65	69	
TOTAL BOD_5	mg/l	224	65	51	15	
SOL. BOD_5	mg/l	86	36	25	6	
TOTAL COD	mg/l	586	87	82	69	
SOL. COD	mg/l	151	41	30	32	
TOTAL SS	mg/l	211	49	60	36	
VOL. SS	mg/l	118	44	46	36	
TOTAL NH_3 (as NH_3-N)	mg/l	12.3	11.9	1.6	3.7	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	11.9	1.6	3.6	
TOTAL KN	mg/l	19.6	19.3	8.4	9.0	
SOL. KN	mg/l	16.2	15.4	4.8	6.5	
NO_2-N	mg/l			2.06		
NO_3-N	mg/l			3.92		
TOTAL-P	mg/l P	6.9		11.3	7.2	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			6,800	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 17, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.394			0.194	0.455
PEAK	MGD	0.696			0.274	0.703
TOTAL	MGD	0.637			0.231	0.617
TEMP.	°C	19.5	20	20	19	
pH		6.8	7.4	6.4	6.9	
D.O.	mg/l	1.8	2.4	2.6	2.8	
ALKALINITY (as $CaCO_3$)	mg/l	119	128	55	72	
TOTAL BOD_5	mg/l	210	60	60	17	
SOL.BOD_5	mg/l	50	47	40	5	
TOTAL COD	mg/l	516	97	95	88	
SOL.COD	mg/l	66	58	45	43	
TOTAL SS	mg/l	104	39	53	44	
VOL. SS	mg/l	97	39	48	44	
TOTAL NH_3 (as NH_3-N)	mg/l	19.9	12.2	0.65	3.9	
SOL. NH_3 (as NH_3-N)	mg/l	16.4	11.9	0.61	3.9	
TOTAL KN	mg/l	25.2	18.8	8.1	10.1	
SOL. KN	mg/l	23.0	15.4	3.9	6.9	
NO_2-N	mg/l			2.70		
NO_3-N	mg/l			4.30		
TOTAL-P	mg/l P	5.3		7.1	9.3	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			25,850	170	
ALGAE CELL CT.	#/ml		56,000	149,000	110,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 18, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.668			0.194	0.703
PEAK	MGD	0.774			0.274	0.831
TOTAL	MGD	0.771			0.231	0.746
TEMP.	^{o}C	19	19	19	18	
pH		6.6	7.1	6.8	6.8	
D.O.	mg/l	1.4	2.0	3.1	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	146	126	47	66	
TOTAL BOD_5	mg/l	150	53	48	10	
SOL.BOD_5	mg/l	80	37	22	6	
TOTAL COD	mg/l	779	121	80	65	
SOL.COD	mg/l	126	45	32	27	
TOTAL SS	mg/l	382	69	52	33	
VOL. SS	mg/l	253	56	46	28	
TOTAL NH_3 (as NH_3-N)	mg/l	12.6	12.7	0.21	3.3	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	12.5	0.19	3.3	
TOTAL KN	mg/l	20.2	19.3	6.0	8.4	
SOL. KN	mg/l	16.5	15.7	2.4	5.9	
NO_2-N	mg/l			2.8		
NO_3-N	mg/l			3.6		
TOTAL-P	mg/l P	19.8		8.2	8.0	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			2,300	30	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 19, 1976 THURSDAY

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.414			0.194	0.446
PEAK	MGD	0.658			0.274	0.588
TOTAL	MGD	0.564			0.231	0.562
TEMP.	°C	20	19	19	19	
pH		7.1	7.5	7.1	7.3	
D.O.	mg/l	1.8	3.2	4.4	2.2	
ALKALINITY (as $CaCO_3$)	mg/l	126	127	48	67	
TOTAL BOD_5	mg/l	200	65	55	22	
SOL.BOD_5	mg/l	100	45	40	12	
TOTAL COD	mg/l	222	109	96	76	
SOL.COD	mg/l	105	65	44	40	
TOTAL SS	mg/l	117	44	44	41	
VOL. SS	mg/l	103	38	39	33	
TOTAL NH_3 (as NH_3-N)	mg/l	12.3	12.0	0.21	2.8	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	11.8	0.19	2.7	
TOTAL KN	mg/l	21.8	20.7	5.8	7.8	
SOL. KN	mg/l	16.8	15.7	2.6	5.2	
NO_2-N	mg/l			1.4		
NO_3-N	mg/l			6.3		
TOTAL-P	mg/l P	8.5		7.6	7.5	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			9,800	110	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 20, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.511			0.231	0.700
PEAK	MGD	1.049			0.231	0.705
TOTAL	MGD	0.738			0.231	0.703
TEMP.	°C	20	20	20	20	
pH		7.1	7.2	7.0	7.0	
D.O.	mg/1	0.8	3.2	3.4	1.4	
ALKALINITY (as $CaCO_3$)	mg/1	139	132	51	61	
TOTAL BOD_5	mg/1	175	76	45	21	
SOL.BOD_5	mg/1	117	50	25	10	
TOTAL COD	mg/1	347	93	84	66	
SOL.COD	mg/1	137	54	29	34	
TOTAL SS	mg/1	176	38	38	31	
VOL. SS	mg/1	155	35	38	31	
TOTAL NH_3 (as NH_3-N)	mg/1	12.9	12.2	0.42	2.5	
SOL. NH_3 (as NH_3-N)	mg/1	12.0	11.9	0.32	2.3	
TOTAL KN	mg/1	17.1	19.3	5.0	5.0	
SOL. KN	mg/1	15.3	14.2	2.6	3.7	
NO_2-N	mg/1			0.77		
NO_3-N	mg/1			6.4		
TOTAL-P	mg/1 P	9.8		5.7	7.2	
CHLORINE RESIDUAL	mg/1				0.2	
FECAL COLIFORMS	#/100ml			7,500	970	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: FEBRUARY 21, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.520			0.151	0.610
PEAK	MGD	0.660			0.274	0.620
TOTAL	MGD	0.629			0.231	0.614
TEMP.	°C	19	18	18	18	
pH		7.2	7.2	6.9	7.2	
D.O.	mg/l	0.0	4.2	4.5	3.0	
ALKALINITY (as $CaCO_3$)	mg/l	130	135	53	63	
TOTAL BOD_5	mg/l	227	91	81	36	
SOL.BOD_5	mg/l	69	59	35	20	
TOTAL COD	mg/l	307	123	102	95	
SOL.COD	mg/l	91	66	37	32	
TOTAL SS	mg/l	112	71	53	115	
VOL. SS	mg/l	92	55	45	44	
TOTAL NH_3 (as NH_3-N)	mg/l	13.7	13.3	0.19	2.3	
SOL. NH_3 (as NH_3-N)	mg/l	13.2	13.2	0.17	2.3	
TOTAL KN	mg/l	22.1	20.4	7.1	8.8	
SOL. KN	mg/l	21.3	18.5	4.3	7.3	
NO_2-N	mg/l			0.64		
NO_3-N	mg/l			6.3		
TOTAL-P	mg/l P	6.59		7.34	7.22	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			7,800	60	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 13, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.537			0.160	0.455
PEAK	MGD	0.662			0.212	0.643
TOTAL	MGD	0.637			0.183	0.615
TEMP.	^oC	11	11	12	12	
pH		6.7	7.1	7.3	6.8	
D.O.	mg/l	0.0	3.4	4.1	0.5	
ALKALINITY (as $CaCO_3$)	mg/l	150	50	135	51	
TOTAL BOD_5	mg/l	218	79	56	30	
SOL.BOD_5	mg/l	200	30	31	19	
TOTAL COD	mg/l	255	94	134	76	
SOL.COD	mg/l	219	40	39	48	
TOTAL SS	mg/l	248	50	48	56	
VOL. SS	mg/l	170	41	37	39	
TOTAL NH_3 (as NH_3-N)	mg/l	16.5	4.8	14.5	0.42	
SOL. NH_3 (as NH_3-N)	mg/l	16.2	0.84	9.4	0.35	
TOTAL KN	mg/l	46.2	8.1	21.4	6.0	
SOL. KN	mg/l	19.9	7.6	13.3	2.8	
NO_2-N	mg/l			0.39		
NO_3-N	mg/l			2.3		
TOTAL-P	mg/l P	15.5		7.4	6.3	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			17,000	1,600	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 14, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.539			0.151	0.348
PEAK	MGD	0.625			0.231	0.703
TOTAL	MGD	0.625			0.206	0.607
TEMP.	^oC	14	13	15	15	
pH		6.6	7.2	6.8	6.8	
D.O.	mg/1	0.4	5.1	5.2	0.6	
ALKALINITY (as $CaCO_3$)	mg/1	165	150	57	54	
TOTAL BOD_5	mg/1	181	75	52	26	
SOL.BOD_5	mg/1	160	18	39	18	
TOTAL COD	mg/1	296	112	85	85	
SOL.COD	mg/1	170	59	42	37	
TOTAL SS	mg/1	154	54	50	57	
VOL. SS	mg/1	136	43	34	33	
TOTAL NH_3 (as NH_3-N)	mg/1	20.7	14.1	0.28	0.77	
SOL. NH_3 (as NH_3-N)	mg/1	20.7	13.9	0.14	0.35	
TOTAL KN	mg/1	26.9	23.8	6.7	7.6	
SOL. KN	mg/1	21.8	23.5	2.5	3.5	
NO_2-N	mg/1			0.31		
NO_3-N	mg/1			4.1		
TOTAL-P	mg/1 P	12.0		7.9	8.8	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			1,900	900	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 15, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.488			0.194	0.393
PEAK	MGD	0.645			0.231	0.703
TOTAL	MGD	0.612			0.208	0.597
TEMP.	°C	18	18	16	16	
pH		5.8	7.4	7.0	6.8	
D.O.	mg/l	0.0	0.2	4.5	6.0	
ALKALINITY (as $CaCO_3$)	mg/l	148	144	50	54	
TOTAL BOD_5	mg/l	204	79	67	37	
SOL.BOD_5	mg/l	86	44	40	27	
TOTAL COD	mg/l	712	101	85	67	
SOL.COD	mg/l	144	59	45	46	
TOTAL SS	mg/l	211	78	69	57	
VOL. SS	mg/l	123	46	39	24	
TOTAL NH_3 (as NH_3-N)	mg/l	13.1	15.2	0.42	0.28	
SOL. NH_3 (as NH_3-N)	mg/l	12.8	14.4	0.28	0.21	
TOTAL KN	mg/l	40.6	23.4	6.3	5.4	
SOL. KN	mg/l	22.1	19.6	3.2	3.6	
NO_2-N	mg/l			0.26		
NO_3-N	mg/l			9.3		
TOTAL-P	mg/l P	16.1		8.2	8.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			23,000	3,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 16, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.467			0.114	0.456
PEAK	MGD	0.645			0.194	0.703
TOTAL	MGD	0.604			0.148	0.584
TEMP.	°C	11	11	12	12	
pH		7.1	7.5	7.1	7.2	
D.O.	mg/l	0.0	4.0	4.6	3.5	
ALKALINITY (as $CaCO_3$)	mg/l	162	156	60	60	
TOTAL BOD_5	mg/l	179	72	52	22	
SOL.BOD_5	mg/l	103	39	30	19	
TOTAL COD	mg/l	270	87	71	95	
SOL.COD	mg/l	121	56	33	33	
TOTAL SS	mg/l	180	52	47	52	
VOL. SS	mg/l	127	50	38	44	
TOTAL NH_3 (as NH_3-N)	mg/l	10.9	12.5	0.21	0.14	
SOL. NH_3 (as NH_3-N)	mg/l	10.6	12.3	0.14	0.14	
TOTAL KN	mg/l	18.8	20.3	5.3	3.0	
SOL. KN	mg/l	12.3	14.6	2.5	0.56	
NO_2-N	mg/l			0.17		
NO_3-N	mg/l			9.0		
TOTAL-P	mg/l P	14.0		9.0	8.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			10,000	2,100	
ALGAE CELL CT.	#/ml		69,700	170,900	130,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 17, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.485			0.114	0.485
PEAK	MGD	0.681			0.151	0.703
TOTAL	MGD	0.643			0.128	0.626
TEMP.	^{o}C	20	17	17	16	
pH		7.1	7.5	7.3	7.6	
D.O.	mg/l	1.0	2.4	6.4	5.2	
ALKALINITY (as $CaCO_3$)	mg/l	174	154	67	61	
TOTAL BOD_5	mg/l	195	99	35	14	
SOL.BOD_5	mg/l	135	58	34	7	
TOTAL COD	mg/l	423	115	89	82	
SOL.COD	mg/l	158	76	37	37	
TOTAL SS	mg/l	246	51	30	36	
VOL. SS	mg/l	233	49	23	28	
TOTAL NH_3 (as NH_3-N)	mg/l	16.5	14.4	2.5	0.35	
SOL. NH_3 (as NH_3-N)	mg/l	16.0	12.0	1.5	0.21	
TOTAL KN	mg/l	33.5	23.0	7.5	5.6	
SOL. KN	mg/l	20.2	16.8	4.0	3.1	
NO_2-N	mg/l			0.22		
NO_3-N	mg/l			8.6		
TOTAL-P	mg/l P	13.1		7.4	7.0	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			13,000	1,500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 18, 1975 THURSDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.255			0.129	0.455
PEAK	MGD	0.613			0.151	0.643
TOTAL	MGD	0.563			0.145	0.549
TEMP.	^{o}C	21	19	18	18	
pH		7.3	7.5	7.4	7.3	
D.O.	mg/l	0.8	3.2	6.6	4.8	
ALKALINITY (as $CaCO_3$)	mg/l	154	137	68	56	
TOTAL BOD_5	mg/l	179	66	36	19	
SOL.BOD_5	mg/l	95	24	18	11	
TOTAL COD	mg/l	403	86	100	74	
SOL.COD	mg/l	106	33	81	42	
TOTAL SS	mg/l	100	64	39	16	
VOL. SS	mg/l	81	44	32	13	
TOTAL NH_3 (as NH_3-N)	mg/l	16.2	13.7	3.1	1.1	
SOL. NH_3 (as NH_3-N)	mg/l	15.4	13.4	2.9	1.0	
TOTAL KN	mg/l	33.6	22.0	9.2	6.1	
SOL. KN	mg/l	18.5	16.9	5.5	3.8	
NO_2-N	mg/l			0.13		
NO_3-N	mg/l			6.6		
TOTAL-P	mg/l P	9.6		7.0	7.5	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			9,100	3,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MARCH 19, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.566			0.114	0.393
PEAK	MGD	0.771			0.151	0.831
TOTAL	MGD	0.748			0.134	0.719
TEMP.	°C	21	20	19.5	18	
pH		6.7	7.2	6.9	7.0	
D.O.	mg/l	1.5	3.0	5.0	4.8	
ALKALINITY (as $CaCO_3$)	mg/l	123	146	82	67	
TOTAL BOD_5	mg/l	185	60	55	24	
SOL.BOD_5	mg/l	39	35	24	10	
TOTAL COD	mg/l	222	88	101	64	
SOL.COD	mg/l	45	42	42	45	
TOTAL SS	mg/l	225	23	22	19	
VOL. SS	mg/l	160	17	20	16	
TOTAL NH_3 (as NH_3-N)	mg/l	12.6	13.9	2.8	3.2	
SOL. NH_3 (as NH_3-N)	mg/l	10.8	13.6	1.7	2.4	
TOTAL KN	mg/l	16.9	21.9	9.9	6.8	
SOL. KN	mg/l	11.9	16.2	6.4	6.4	
NO_2-N	mg/l			0.29		
NO_3-N	mg/l			5.3		
TOTAL-P	mg/l P	6.7		7.0	6.7	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			11,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 1, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.677			0.194	0.455
PEAK	MGD	0.853			0.231	0.831
TOTAL	MGD	0.815			0.218	0.776
TEMP.	°C	21	20	20	20	
pH		7.5	7.4	7.1	7.0	
D.O.	mg/l	0.9	0.2	4.6	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	157	116	77	95	
TOTAL BOD_5	mg/l	160	68	69	22	
SOL.BOD_5	mg/l	70	28	25	15	
TOTAL COD	mg/l	361	105	90	69	
SOL.COD	mg/l	94	48	35	45	
TOTAL SS	mg/l	243	52	43	25	
VOL. SS	mg/l	190	42	25	20	
TOTAL NH_3 (as NH_3-N)	mg/l	16.4	9.7	4.8	9.0	
SOL. NH_3 (as NH_3-N)	mg/l	16.0	8.9	4.3	8.8	
TOTAL KN	mg/l	29.8	16.5	10.8	14.1	
SOL. KN	mg/l	19.9	11.6	6.8	11.6	
NO_2-N	mg/l			0.37		
NO_3-N	mg/l			2.4		
TOTAL-P	mg/l P	9.9		5.4	6.4	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			160,000	30,000	
ALGAE CELL CT.	#/ml		529,000	649,000	216,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 2, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.510			0.194	0.703
PEAK	MGD	0.773			0.274	0.703
TOTAL	MGD	0.732			0.239	0.703
TEMP.	°C	21	20	20	20	
pH		7.6	7.8	7.6	8.0	
D.O.	mg/1	0.0	0.3	5.2	1.6	
ALKALINITY (as $CaCO_3$)	mg/1	128	102	65	89	
TOTAL BOD_5	mg/1	148	74	151	25	
SOL.BOD_5	mg/1	84	32	25	9	
TOTAL COD	mg/1	238	92	82	68	
SOL.COD	mg/1	145	52	34	42	
TOTAL SS	mg/1	91	45	57	28	
VOL. SS	mg/1	76	42	42	26	
TOTAL NH_3 (as NH_3-N)	mg/1	13.4	9.0	2.8	7.5	
SOL. NH_3 (as NH_3-N)	mg/1	13.2	8.5	2.7	7.3	
TOTAL KN	mg/1	24.6	16.2	9.9	13.0	
SOL. KN	mg/1	21.0	12.0	5.6	10.9	
NO_2-N	mg/1			1.3		
NO_3-N	mg/1			6.9		
TOTAL-P	mg/1 P	7.8		6.8	6.6	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			11,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 3, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.424			0.193	0.455
PEAK	MGD	0.984			0.273	0.702
TOTAL	MGD	0.720			0.237	0.678
TEMP.	°C	21	20	20	19	
pH		7.1	7.3	7.2	7.2	
D.O.	mg/l	0.8	1.9	4.7	2.7	
ALKALINITY (as $CaCO_3$)	mg/l	145	116	58	91	
TOTAL BOD_5	mg/l	169	75	66	28	
SOL.BOD_5	mg/l	76	35	22	12	
TOTAL COD	mg/l	191	97	88	65	
SOL.COD	mg/l	88	53	38	38	
TOTAL SS	mg/l	122	47	59	34	
VOL. SS	mg/l	98	44	46	30	
TOTAL NH_3 (as NH_3-N)	mg/l	17.2	8.7	0.91	6.7	
SOL. NH_3 (as NH_3-N)	mg/l	16.8	8.4	0.70	6.6	
TOTAL KN	mg/l	29.3	16.9	7.8	11.2	
SOL. KN	mg/l	24.3	12.6	3.7	9.3	
NO_2-N	mg/l			0.41		
NO_3-N	mg/l			6.9		
TOTAL-P	mg/l P	7.2		6.6	6.7	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			75,000	1,300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 4, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.484			0.194	0.348
PEAK	MGD	0.773			0.254	0.702
TOTAL	MGD	0.640			0.231	0.608
TEMP.	°C	17	17	17	17	
pH		7.3	7.3	6.8	7.1	
D.O.	mg/1	0.3	1.2	4.9	2.3	
ALKALINITY (as $CaCO_3$)	mg/1	147	115	55	83	
TOTAL BOD_5	mg/1	189	58	53	21	
SOL.BOD_5	mg/1	79	33	22	10	
TOTAL COD	mg/1	257	98	87	57	
SOL.COD	mg/1	91	54	32	32	
TOTAL SS	mg/1	108	49	67	34	
VOL. SS	mg/1	81	45	45	21	
TOTAL NH_3 (as NH_3-N)	mg/1	16.5	10.4	0.46	5.0	
SOL. NH_3 (as NH_3-N)	mg/1	15.5	6.4	0.31	4.8	
TOTAL KN	mg/1	26.7	17.6	6.8	12.0	
SOL. KN	mg/1	23.5	16.7	2.9	9.1	
NO_2-N	mg/1			0.10		
NO_3-N	mg/1			7.1		
TOTAL-P	mg/1 P	8.3		6.9	5.9	
CHLORINE RESIDUAL	mg/1				0.2	
FECAL COLIFORMS	#/100ml			10,000	200	
ALGAE CELL CT.	#/ml		480,000	662,000	280,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 5, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.518			0.151	0.455
PEAK	MGD	0.681			0.151	0.703
TOTAL	MGD	0.658			0.151	0.625
TEMP.	°C	15	15	15	15	
pH		7.1	7.4	7.1	7.4	
D.O.	mg/l	0.0	0.2	3.6	2.5	
ALKALINITY (as $CaCO_3$)	mg/l	131	112	52	73	
TOTAL BOD_5	mg/l	144	47	42	15	
SOL.BOD_5	mg/l	65	25	23	10	
TOTAL COD	mg/l	233	112	97	82	
SOL.COD	mg/l	92	63	38	38	
TOTAL SS	mg/l	130	43	55	33	
VOL. SS	mg/l	126	38	50	31	
TOTAL NH_3 (as NH_3-N)	mg/l	15.7	9.8	0.35	4.1	
SOL. NH_3 (as NH_3-N)	mg/l	14.8	9.5	0.28	3.9	
TOTAL KN	mg/l	29.3	18.1	9.1	9.6	
SOL. KN	mg/l	26.5	13.6	2.8	6.9	
NO_2-N	mg/l			0.19		
NO_3-N	mg/l			8.9		
TOTAL-P	mg/l P	6.7		6.9	7.5	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			100,000	30,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 6, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.365			0.151	0.348
PEAK	MGD	0.978			0.255	0.643
TOTAL	MGD	0.624			0.231	0.595
TEMP.	°C	16	16	15	15	
pH		7.3	7.2	7.0	6.9	
D.O.	mg/l	0.0	0.2	4.4	1.7	
ALKALINITY (as $CaCO_3$)	mg/l	160	120	56	69	
TOTAL BOD_5	mg/l	122	55	46	18	
SOL.BOD_5	mg/l	60	39	27	9	
TOTAL COD	mg/l	236	115	107	80	
SOL.COD	mg/l	109	60	38	39	
TOTAL SS	mg/l	125	43	54	45	
VOL. SS	mg/l	119	37	47	33	
TOTAL NH_3 (as NH_3-N)	mg/l	18.2	9.2	0.70	3.6	
SOL. NH_3 (as NH_3-N)	mg/l	16.8	9.0	0.42	2.8	
TOTAL KN	mg/l	31.8	18.2	8.0	8.6	
SOL. KN	mg/l	29.0	13.6	2.9	5.6	
NO_2-N	mg/l			0.17		
NO_3-N	mg/l			5.1		
TOTAL-P	mg/l P	8.3		6.5	7.0	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			560,000	21,000	
ALGAE CELL CT.	#/ml		502,000	719,000	460,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 7, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.309			0.114	0.348
PEAK	MGD	0.544			0.151	0.485
TOTAL	MGD	0.489			0.138	0.465
TEMP.	^{o}C	16	16	15	15	
pH		7.1	7.3	6.9	6.7	
D.O.	mg/l	0.0	1.1	5.6	2.5	
ALKALINITY (as $CaCO_3$)	mg/l	140	115	61	65	
TOTAL BOD_5	mg/l	210	73	59	27	
SOL.BOD_5	mg/l	72	45	26	15	
TOTAL COD	mg/l	274	134	99	72	
SOL.COD	mg/l	98	57	37	30	
TOTAL SS	mg/l	142	51	62	42	
VOL. SS	mg/l	136	39	47	27	
TOTAL NH_3 (as NH_3-N)	mg/l	14.7	9.0	1.2	2.5	
SOL. NH_3 (as NH_3-N)	mg/l	13.6	8.4	1.1	2.4	
TOTAL KN	mg/l	26.6	18.5	8.1	8.5	
SOL. KN	mg/l	25.1	13.3	3.4	4.5	
NO_2-N	mg/l			0.17		
NO_3-N	mg/l			6.8		
TOTAL-P	mg/l P	6.1		6.3	7.1	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			150,000	3,800	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 8, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.321			0.116	0.350
PEAK	MGD	0.560			0.159	0.490
TOTAL	MGD	0.496			0.142	0.469
TEMP.	°C	23	22	22	21	
pH		7.2	7.3	6.9	6.7	
D.O.	mg/l	0.0	1.7	4.3	2.2	
ALKALINITY (as $CaCO_3$)	mg/l	172	127	69	70	
TOTAL BOD_5	mg/l	107	60	39	33	
SOL.BOD_5	mg/l	70	52	29	11	
TOTAL COD	mg/l	251	115	74	71	
SOL.COD	mg/l	89	63	33	27	
TOTAL SS	mg/l	89	53	48	41	
VOL. SS	mg/l	81	49	43	33	
TOTAL NH_3 (as NH_3-N)	mg/l	11.8	9.4	2.2	3.8	
SOL. NH_3 (as NH_3-N)	mg/l	10.6	9.2	2.0	3.8	
TOTAL KN	mg/l	27.2	17.5	9.4	9.1	
SOL. KN	mg/l	25.9	13.4	4.7	5.4	
NO_2-N	mg/l			0.21		
NO_3-N	mg/l			11.3		
TOTAL-P	mg/l P	8.2		6.5	6.8	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			190,000	2,700	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 9, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.550			0.194	0.703
PEAK	MGD	0.815			0.300	0.713
TOTAL	MGD	0.742			0.274	0.703
TEMP.	^{o}C	22	24	23	26	
pH		7.0	7.6	7.3	7.3	
D.O.	mg/l	0.2	5.8	6.9	5.8	
ALKALINITY (as $CaCO_3$)	mg/l	130	125	73	72	
TOTAL BOD_5	mg/l	208	85	68	40	
SOL.BOD_5	mg/l	74	49	33	13	
TOTAL COD	mg/l	1141	131	92	69	
SOL.COD	mg/l	84	59	47	27	
TOTAL SS	mg/l	120	75	75	41	
VOL. SS	mg/l	103	60	69	30	
TOTAL NH_3 (as NH_3-N)	mg/l	10.4	9.5	2.0	2.9	
SOL. NH_3 (as NH_3-N)	mg/l	10.2	9.4	1.8	2.7	
TOTAL KN	mg/l	28.8	20.3	9.5	9.4	
SOL. KN	mg/l	14.7	14.3	4.9	5.5	
NO_2-N	mg/l			0.28		
NO_3-N	mg/l			6.0		
TOTAL-P	mg/l P	13.3		6.8	6.9	
CHLORINE RESIDUAL	mg/l				0.3	
FECAL COLIFORMS	#/100ml			68,000	7,200	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 10, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.448			0.160	0.393
PEAK	MGD	0.626			0.255	0.643
TOTAL	MGD	0.584			0.212	0.554
TEMP.	°C	24	24	26	26	
pH		6.7	6.9	6.8	7.0	
D.O.	mg/l	1.2	5.1	5.2	3.8	
ALKALINITY (as $CaCO_3$)	mg/l	135	117	77	70	
TOTAL BOD_5	mg/l	255	62	44	27	
SOL. BOD_5	mg/l	35	22	11	9	
TOTAL COD	mg/l	640	133	97	70	
SOL. COD	mg/l	86	65	38	30	
TOTAL SS	mg/l	472	61	62	20	
VOL. SS	mg/l	303	55	47	12	
TOTAL NH_3 (as NH_3-N)	mg/l	13.6	9.0	3.0	2.5	
SOL. NH_3 (as NH_3-N)	mg/l	12.6	8.5	2.7	2.4	
TOTAL KN	mg/l	27.0	19.9	9.9	7.5	
SOL. KN	mg/l	18.1	13.7	5.9	3.6	
NO_2-N	mg/l			0.38		
NO_3-N	mg/l			5.6		
TOTAL-P	mg/l P	9.9		6.4	6.2	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			190,000	1,300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 11, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.405			0.194	0.393
PEAK	MGD	0.778			0.194	0.567
TOTAL	MGD	0.592			0.194	0.564
TEMP.	°C	23	22	22	22	
pH		7.1	7.3	7.1	7.0	
D.O.	mg/l	0.0	0.1	4.6	3.6	
ALKALINITY (as $CaCO_3$)	mg/l	161	129	86	71	
TOTAL BOD_5	mg/l	181	66	38	20	
SOL.BOD_5	mg/l	77	34	16	9	
TOTAL COD	mg/l	360	123	89	68	
SOL.COD	mg/l	114	76	41	43	
TOTAL SS	mg/l	167	43	72	37	
VOL. SS	mg/l	128	36	45	32	
TOTAL NH_3 (as NH_3-N)	mg/l	16.5	9.4	3.9	2.6	
SOL. NH_3 (as NH_3-N)	mg/l	15.1	9.2	3.8	2.4	
TOTAL KN	mg/l	27.6	19.5	11.3	7.2	
SOL. KN	mg/l	22.0	14.3	6.9	4.4	
NO_2-N	mg/l			0.31		
NO_3-N	mg/l			5.4		
TOTAL-P	mg/l P	9.4		6.6	6.2	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			135,000	800	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 12, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.255			0.194	0.455
PEAK	MGD	0.612			0.274	0.587
TOTAL	MGD	0.529			0.255	0.501
TEMP.	^{o}C	23	22	23	23	
pH		6.9	7.3	7.3	7.2	
D.O.	mg/1	0.0	0.1	4.1	3.4	
ALKALINITY (as $CaCO_3$)	mg/1	159	133	111	70	
TOTAL BOD_5	mg/1	178	78	63	20	
SOL.BOD_5	mg/1	76	33	22	8	
TOTAL COD	mg/1	701	140	83	66	
SOL.COD	mg/1	120	77	41	52	
TOTAL SS	mg/1	68	57	56	18	
VOL. SS	mg/1	50	48	35	12	
TOTAL NH_3 (as NH_3-N)	mg/1	16.2	10.2	8.3	4.6	
SOL. NH_3 (as NH_3-N)	mg/1	15.3	8.4	6.7	3.7	
TOTAL KN	mg/1	35.1	20.7	11.3	6.7	
SOL. KN	mg/1	21.7	15.4	8.6	5.8	
NO_2-N	mg/1			0.44		
NO_3-N	mg/1			4.5		
TOTAL-P	mg/1 P	10.6		6.3	5.1	
CHLORINE RESIDUAL	mg/1				0.1	
FECAL COLIFORMS	#/100ml			500,000	88,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 13, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.399			0.160	0.455
PEAK	MGD	0.797			0.299	0.776
TOTAL	MGD	0.699			0.231	0.659
TEMP.	^{o}C	23	23	23	23	
pH		6.8	7.2	7.4	6.9	
D.O.	mg/1	0.0	0.1	3.6	2.0	
ALKALINITY (as $CaCO_3$)	mg/1	151	139	98	70	
TOTAL BOD_5	mg/1	198	63	54	23	
SOL.BOD_5	mg/1	65	40	30	10	
TOTAL COD	mg/1	402	67	78	55	
SOL.COD	mg/1	89	56	34	36	
TOTAL SS	mg/1	207	69	63	19	
VOL. SS	mg/1	149	60	41	17	
TOTAL NH_3 (as NH_3-N)	mg/1	12.3	9.9	5.7	3.1	
SOL. NH_3 (as NH_3-N)	mg/1	11.6	8.1	5.4	2.5	
TOTAL KN	mg/1	26.2	20.4	12.4	6.8	
SOL. KN	mg/1	14.6	16.5	9.5	6.0	
NO_2-N	mg/1			0.39		
NO_3-N	mg/1			4.47		
TOTAL-P	mg/1 P	10.8		7.1	6.8	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			130,000	1,800	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 14, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.449			0.151	0.393
PEAK	MGD	0.765			0.274	0.775
TOTAL	MGD	0.700			0.234	0.656
TEMP.	^{o}C	23	24	23	23	
pH		7.2	6.8	7.4	7.2	
D.O.	mg/l	0.0	0.1	4.0	1.8	
ALKALINITY (as $CaCO_3$)	mg/l	171	126	91	72	
TOTAL BOD_5	mg/l	157	104	61	30	
SOL.BOD_5	mg/l	79	48	35	12	
TOTAL COD	mg/l	248	127	88	70	
SOL.COD	mg/l	103	67	51	38	
TOTAL SS	mg/l	144	28	56	32	
VOL. SS	mg/l	118	23	35	21	
TOTAL NH_3 (as NH_3-N)	mg/l	27.0	9.8	5.9	3.3	
SOL. NH_3 (as NH_3-N)	mg/l	24.9	9.4	5.7	3.2	
TOTAL KN	mg/l	44.1	18.9	11.8	8.4	
SOL. KN	mg/l	36.0	15.7	8.6	5.7	
NO_2-N	mg/l			0.47		
NO_3-N	mg/l			4.7		
TOTAL-P	mg/l P	7.8		7.2	8.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			300,000	23,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 15, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.409			0.160	0.392
PEAK	MGD	0.644			0.274	0.643
TOTAL	MGD	0.605			0.231	0.573
TEMP.	°C	22	23	23	22	
pH		7.2	7.5	7.4	7.1	
D.O.	mg/l	0.0	2.8	4.2	2.7	
ALKALINITY (as $CaCO_3$)	mg/l	138	135	114	80	
TOTAL BOD_5	mg/l	170	50	52	16	
SOL.BOD_5	mg/l	68	36	24	6	
TOTAL COD	mg/l	281	117	92	67	
SOL.COD	mg/l	84	69	59	49	
TOTAL SS	mg/l	113	49	55	26	
VOL. SS	mg/l	72	44	34	16	
TOTAL NH_3 (as NH_3-N)	mg/l	16.0	10.5	9.5	3.5	
SOL. NH_3 (as NH_3-N)	mg/l	14.0	9.8	9.3	3.4	
TOTAL KN	mg/l	27.7	19.8	13.1	8.7	
SOL. KN	mg/l	21.0	13.8	9.6	7.7	
NO_2-N	mg/l			0.62		
NO_3-N	mg/l			3.6		
TOTAL-P	mg/l P	7.1		9.1	7.2	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			175,000	3,000	
ALGAE CELL CT.	#/ml		56,000	220,000	180,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 16, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.563			0.255	0.485
PEAK	MGD	0.894			0.255	0.831
TOTAL	MGD	0.828			0.255	0.774
TEMP.	^{o}C	22	22	22	21	
pH		7.1	7.3	7.2	7.3	
D.O.	mg/l	1.5	2.6	5.0	2.4	
ALKALINITY (as $CaCO_3$)	mg/l	142	134	101	80	
TOTAL BOD_5	mg/l	199	83	66	33	
SOL.BOD_5	mg/l	68	32	24	13	
TOTAL COD	mg/l	306	123	81	79	
SOL.COD	mg/l	97	47	35	30	
TOTAL SS	mg/l	271	113	77	46	
VOL. SS	mg/l	185	61	37	20	
TOTAL NH_3 (as NH_3-N)	mg/l	14.7	12.9	6.8	4.1	
SOL. NH_3 (as NH_3-N)	mg/l	13.0	12.7	6.6	3.9	
TOTAL KN	mg/l	27.2	22.0	14.8	8.2	
SOL. KN	mg/l	18.1	16.1	9.5	6.3	
NO_2-N	mg/l			0.92		
NO_3-N	mg/l			3.6		
TOTAL-P	mg/l P	9.2		7.5	7.1	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			73,000	300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 17, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.503			0.212	0.485
PEAK	MGD	0.798			0.315	0.703
TOTAL	MGD	0.714			0.255	0.674
TEMP.	°C	22	22	23	20	
pH		7.1	7.5	7.3	7.1	
D.O.	mg/l	0.6	0.5	6.5	2.2	
ALKALINITY (as $CaCO_3$)	mg/l	123	142	102	85	
TOTAL BOD_5	mg/l	154	41	44	23	
SOL.BOD_5	mg/l	76	29	26	13	
TOTAL COD	mg/l	311	67	80	37	
SOL.COD	mg/l	110	34	32	25	
TOTAL SS	mg/l	228	68	75	28	
VOL. SS	mg/l	157	58	57	23	
TOTAL NH_3 (as NH_3-N)	mg/l	14.3	13.0	4.8	3.3	
SOL. NH_3 (as NH_3-N)	mg/l	13.4	12.7	4.5	2.9	
TOTAL KN	mg/l	28.4	21.0	12.3	7.9	
SOL. KN	mg/l	18.6	16.0	7.4	7.2	
NO_2-N	mg/l			1.9		
NO_3-N	mg/l			2.1		
TOTAL-P	mg/l P	11.7		8.5	6.4	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			54,000	35,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 18, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.363			0.194	0.485
PEAK	MGD	0.794			0.315	0.643
TOTAL	MGD	0.675			0.274	0.630
TEMP.	^{o}C	23	23	23	23	
pH		7.4	7.5	7.3	7.3	
D.O.	mg/l	0.0	3.6	3.7	2.5	
ALKALINITY (as $CaCO_3$)	mg/l	154	147	86	83	
TOTAL BOD_5	mg/l	195	66	63	25	
SOL.BOD_5	mg/l	88	33	28	12	
TOTAL COD	mg/l	289	91	88	70	
SOL.COD	mg/l	106	50	44	49	
TOTAL SS	mg/l	107	43	72	31	
VOL. SS	mg/l	78	29	40	17	
TOTAL NH_3 (as NH_3-N)	mg/l	17.9	12.9	3.9	3.5	
SOL. NH_3 (as NH_3-N)	mg/l	13.3	12.6	3.2	1.5	
TOTAL KN	mg/l	27.0	18.8	9.9	6.6	
SOL. KN	mg/l	16.5	13.7	5.0	4.4	
NO_2-N	mg/l			3.8		
NO_3-N	mg/l			2.6		
TOTAL-P	mg/l P	10.4		7.8	6.5	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			54,000	400	
ALGAE CELL CT.	#/ml		35,000	130,000	13,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 19, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.331			0.212	0.485
PEAK	MGD	0.799			0.300	0.643
TOTAL	MGD	0.638			0.274	0.599
TEMP.	°C	23	24	24	24	
pH		7.3	7.5	7.3	7.4	
D.O.	mg/l	0.0	3.8	3.9	2.2	
ALKALINITY (as $CaCO_3$)	mg/l	154	145	75	80	
TOTAL BOD_5	mg/l	160	61	62	29	
SOL.BOD_5	mg/l	50	34	32	16	
TOTAL COD	mg/l	577	107	134	66	
SOL.COD	mg/l	94	48	46	36	
TOTAL SS	mg/l	112	51	69	25	
VOL. SS	mg/l	81	41	49	19	
TOTAL NH_3 (as NH_3-N)	mg/l	16.0	13.2	0.86	4.2	
SOL. NH_3 (as NH_3-N)	mg/l	15.0	11.4	0.21	3.5	
TOTAL KN	mg/l	32.1	17.1	6.7	5.7	
SOL. KN	mg/l	22.5	12.6	1.7	3.5	
NO_2-N	mg/l			5.7		
NO_3-N	mg/l			1.2		
TOTAL-P	mg/l P	8.9		7.8	7.6	
CHLORINE RESIDUAL	mg/l				0.3	
FECAL COLIFORMS	#/100ml			200,000	84,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 20, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.319			0.212	0.393
PEAK	MGD	0.773			0.300	0.643
TOTAL	MGD	0.628			0.274	0.592
TEMP.	^{o}C	23	24	24	23	
pH		7.1	7.6	7.3	7.3	
D.O.	mg/l	0.0	3.2	3.2	2.8	
ALKALINITY (as $CaCO_3$)	mg/l	152	143	68	78	
TOTAL BOD_5	mg/l	200	52	62	30	
SOL. BOD_5	mg/l	120	27	20	13	
TOTAL COD	mg/l	291	82	97	59	
SOL. COD	mg/l	164	44	35	35	
TOTAL SS	mg/l	310	67	71	37	
VOL. SS	mg/l	210	37	46	17	
TOTAL NH_3 (as NH_3-N)	mg/l	13.3	12.6	0.42	3.0	
SOL. NH_3 (as NH_3-N)	mg/l	10.8	9.9	0.14	1.5	
TOTAL KN	mg/l	35.0	20.3	8.5	7.3	
SOL. KN	mg/l	17.6	16.2	3.5	5.7	
NO_2-N	mg/l			3.4		
NO_3-N	mg/l			4.6		
TOTAL-P	mg/l P	10.5		6.4	5.4	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			150,000	19,000	
ALGAE CELL CT.	#/ml		50,000	130,000	62,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 21, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.374			0.160	0.485
PEAK	MGD	0.754			0.255	0.703
TOTAL	MGD	0.687			0.231	0.650
TEMP.	°C	23	24	24	23	
pH		7.3	7.6	7.5	7.4	
D.O.	mg/l	0.0	2.1	3.8	2.5	
ALKALINITY (as $CaCO_3$)	mg/l	151	143	64	76	
TOTAL BOD_5	mg/l	186	61	50	28	
SOL.BOD_5	mg/l	65	36	26	12	
TOTAL COD	mg/l	297	91	92	82	
SOL.COD	mg/l	92	43	33	49	
TOTAL SS	mg/l	146	46	70	56	
VOL. SS	mg/l	104	42	51	44	
TOTAL NH_3 (as NH_3-N)	mg/l	10.4	10.9	0.21	2.0	
SOL. NH_3 (as NH_3-N)	mg/l	9.2	10.6	0.14	1.5	
TOTAL KN	mg/l	19.5	17.9	5.6	9.4	
SOL. KN	mg/l	12.6	11.9	0.90	5.2	
NO_2-N	mg/l			3.2		
NO_3-N	mg/l			6.9		
TOTAL-P	mg/l P	12.2		8.4	6.7	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			92,000	17,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 22, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.195			0.151	0.393
PEAK	MGD	0.691			0.315	0.643
TOTAL	MGD	0.627			0.253	0.592
TEMP.	°C	24	24	24	23	
pH		7.1	7.5	7.3	7.1	
D.O.	mg/l	0.0	2.7	4.2	2.7	
ALKALINITY (as $CaCO_3$)	mg/l	150	143	63	66	
TOTAL BOD_5	mg/l	192	31	42	28	
SOL.BOD_5	mg/l	86	16	15	7	
TOTAL COD	mg/l	837	85	92	66	
SOL.COD	mg/l	97	43	23	35	
TOTAL SS	mg/l	153	44	79	20	
VOL. SS	mg/l	115	34	55	14	
TOTAL NH_3 (as NH_3-N)	mg/l	12.3	12.9	0.21	1.1	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	12.9	0.14	1.1	
TOTAL KN	mg/l	27.3	20.3	8.2	6.2	
SOL. KN	mg/l	17.2	16.8	3.4	4.0	
NO_2-N	mg/l			0.36		
NO_3-N	mg/l			13.0		
TOTAL-P	mg/l P	18.4		7.9	9.3	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			66,000	500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 23, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.526			0.160	0.485
PEAK	MGD	0.827			0.329	0.776
TOTAL	MGD	0.753			0.272	0.699
TEMP.	^{o}C	24	24	24	24	
pH		7.4	7.8	7.5	7.3	
D.O.	mg/l	0.0	4.7	5.0	4.6	
ALKALINITY (as $CaCO_3$)	mg/l	154	145	64	65	
TOTAL BOD_5	mg/l	236	79	55	30	
SOL.BOD_5	mg/l	85	36	24	12	
TOTAL COD	mg/l	935	94	89	70	
SOL.COD	mg/l	104	41	29	34	
TOTAL SS	mg/l	253	38	73	34	
VOL. SS	mg/l	178	33	56	27	
TOTAL NH_3 (as NH_3-N)	mg/l	13.7	13.1	0.84	5.5	
SOL. NH_3 (as NH_3-N)	mg/l	12.9	12.5	0.63	3.1	
TOTAL KN	mg/l	35.8	20.4	7.5	1.1	
SOL. KN	mg/l	18.5	15.0	2.8	0.77	
NO_2-N	mg/l			0.23		
NO_3-N	mg/l			6.3		
TOTAL-P	mg/l P	16.0		9.0	6.8	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			76,000	140	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 24, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.367			0.129	0.485
PEAK	MGD	1.029			0.300	0.831
TOTAL	MGD	0.796			0.234	0.747
TEMP.	°C	23	24	24	24	
pH		7.3	7.4	7.6	7.0	
D.O.	mg/l	0.0	0.5	2.7	1.7	
ALKALINITY (as $CaCO_3$)	mg/l	144	147	74	64	
TOTAL BOD_5	mg/l	196	81	65	25	
SOL.BOD_5	mg/l	145	38	26	11	
TOTAL COD	mg/l	632	96	91	53	
SOL.COD	mg/l	286	50	37	35	
TOTAL SS	mg/l	236	59	56	40	
VOL. SS	mg/l	164	44	42	27	
TOTAL NH_3 (as NH_3-N)	mg/l	13.6	13.2	0.35	1.2	
SOL. NH_3 (as NH_3-N)	mg/l	12.6	12.6	0.28	1.1	
TOTAL KN	mg/l	38.1	20.6	8.5	4.7	
SOL. KN	mg/l	17.4	16.4	4.9	2.7	
NO_2-N	mg/l			0.33		
NO_3-N	mg/l			6.5		
TOTAL-P	mg/l P	7.3		6.2	5.3	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			82,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 25, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.543			0.194	0.587
PEAK	MGD	0.756			0.274	0.703
TOTAL	MGD	0.726			0.243	0.683
TEMP.	°C	22	22	23	21	
pH		7.3	7.7	7.5	7.3	
D.O.	mg/l	0.0	2.4	3.7	2.4	
ALKALINITY (as $CaCO_3$)	mg/l	139	137	71	61	
TOTAL BOD_5	mg/l	235	76	63	29	
SOL.BOD_5	mg/l	89	35	26	12	
TOTAL COD	mg/l	553	85	73	60	
SOL.COD	mg/l	115	46	31	37	
TOTAL SS	mg/l	255	40	73	29	
VOL. SS	mg/l	183	34	54	27	
TOTAL NH_3 (as NH_3-N)	mg/l	14.4	13.8	2.3	0.56	
SOL. NH_3 (as NH_3-N)	mg/l	13.2	12.6	2.3	0.52	
TOTAL KN	mg/l	36.4	19.3	10.0	5.2	
SOL. KN	mg/l	17.8	16.4	4.7	1.5	
NO_2-N	mg/l			0.51		
NO_3-N	mg/l			6.3		
TOTAL-P	mg/l P	22.5		7.3	6.3	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			120,000	4,800	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 26, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.441			0.129	0.393
PEAK	MGD	0.749			0.300	0.643
TOTAL	MGD	0.662			0.237	0.619
TEMP.	^{o}C	22	21	21	20	
pH		7.1	7.6	7.5	7.4	
D.O.	mg/l	0.0	1.5	3.9	1.8	
ALKALINITY (as $CaCO_3$)	mg/l	154	147	85	75	
TOTAL BOD_5	mg/l	193	48	52	18	
SOL.BOD_5	mg/l	116	32	27	11	
TOTAL COD	mg/l	224	93	88	61	
SOL.COD	mg/l	125	50	32	35	
TOTAL SS	mg/l	202	50	75	32	
VOL. SS	mg/l	139	35	44	16	
TOTAL NH_3 (as NH_3-N)	mg/l	13.7	13.8	2.6	0.80	
SOL. NH_3 (as NH_3-N)	mg/l	13.2	13.6	2.1	0.79	
TOTAL KN	mg/l	43.0	20.7	10.3	5.0	
SOL. KN	mg/l	18.8	16.9	5.6	4.6	
NO_2-N	mg/l			0.93		
NO_3-N	mg/l			9.0		
TOTAL-P	mg/l P	35.2		8.7	7.1	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			100,000	200	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 27, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.582			0.212	0.587
PEAK	MGD	0.848			0.274	0.831
TOTAL	MGD	0.795			0.258	0.742
TEMP.	°C	23	22	22	21	
pH		7.7	7.4	7.3	7.6	
D.O.	mg/l	0.0	1.5	3.6	1.3	
ALKALINITY (as $CaCO_3$)	mg/l	161	152	86	81	
TOTAL BOD_5	mg/l	136	68	57	35	
SOL.BOD_5	mg/l	79	49	33	16	
TOTAL COD	mg/l	360	93	122	93	
SOL.COD	mg/l	93	58	46	38	
TOTAL SS	mg/l	91	45	76	46	
VOL. SS	mg/l	76	41	45	32	
TOTAL NH_3 (as NH_3-N)	mg/l	24.6	13.2	2.7	2.2	
SOL. NH_3 (as NH_3-N)	mg/l	21.0	12.4	2.5	1.8	
TOTAL KN	mg/l	39.9	20.2	9.5	4.7	
SOL. KN	mg/l	31.4	16.2	4.3	4.3	
NO_2-N	mg/l			1.4		
NO_3-N	mg/l			7.0		
TOTAL-P	mg/l P	8.6		8.4	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			360,000	4,700	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 28, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.544			0.194	0.455
PEAK	MGD	0.800			0.255	0.776
TOTAL	MGD	0.739			0.246	0.692
TEMP.	°C	24	23	23	23	
pH		7.1	7.6	7.4	7.7	
D.O.	mg/l	0.0	1.4	2.7	2.1	
ALKALINITY (as $CaCO_3$)	mg/l	145	150	84	76	
TOTAL BOD_5	mg/l	195	102	68	32	
SOL.BOD_5	mg/l	93	42	37	14	
TOTAL COD	mg/l	795	123	101	73	
SOL.COD	mg/l	152	51	41	32	
TOTAL SS	mg/l	252	77	82	50	
VOL. SS	mg/l	163	70	62	42	
TOTAL NH_3 (as NH_3-N)	mg/l	12.5	12.7	2.2	1.2	
SOL. NH_3 (as NH_3-N)	mg/l	11.4	12.4	2.1	0.84	
TOTAL KN	mg/l	30.9	20.6	9.0	7.1	
SOL. KN	mg/l	16.9	16.4	5.0	3.7	
NO_2-N	mg/l			1.8		
NO_3-N	mg/l			8.7		
TOTAL-P	mg/l P	13.9		7.3	8.8	
CHLORINE RESIDUAL	mg/l				0.2	
FECAL COLIFORMS	#/100ml			180,000	6,800	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 29, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.541			0.231	0.485
PEAK	MGD	0.850			0.315	0.831
TOTAL	MGD	0.791			0.283	0.741
TEMP.	°C	24	23	23	23	
pH		7.2	7.8	7.6	7.5	
D.O.	mg/l	0.0	1.4	2.5	1.5	
ALKALINITY (as $CaCO_3$)	mg/l	155	147	86	75	
TOTAL BOD_5	mg/l	180	72	58	28	
SOL.BOD_5	mg/l	102	43	29	14	
TOTAL COD	mg/l	582	108	92	72	
SOL.COD	mg/l	177	59	52	33	
TOTAL SS	mg/l	98	33	54	32	
VOL. SS	mg/l	66	32	42	30	
TOTAL NH_3 (as NH_3-N)	mg/l	16.9	14.0	2.3	0.83	
SOL. NH_3 (as NH_3-N)	mg/l	16.8	12.6	2.1	0.56	
TOTAL KN	mg/l	34.7	18.9	8.4	4.8	
SOL. KN	mg/l	23.5	17.8	5.7	2.8	
NO_2-N	mg/l			2.1		
NO_3-N	mg/l			7.2		
TOTAL-P	mg/l P	12.6		8.6	8.3	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			160,000	2,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: APRIL 30, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.503			0.194	0.392
PEAK	MGD	0.798			0.315	0.776
TOTAL	MGD	0.735			0.263	0.684
TEMP.	°C	24	23	23	23	
pH		7.1	7.4	7.4	7.3	
D.O.	mg/l	0.0	1.8	3.4	3.2	
ALKALINITY (as $CaCO_3$)	mg/l	98	154	80	82	
TOTAL BOD_5	mg/l	84	62	45	25	
SOL.BOD_5	mg/l	48	44	26	10	
TOTAL COD	mg/l	120	110	90	76	
SOL.COD	mg/l	50	66	83	56	
TOTAL SS	mg/l	94	32	56	37	
VOL. SS	mg/l	62	26	37	24	
TOTAL NH_3 (as NH_3-N)	mg/l	9.1	13.8	1.9	0.53	
SOL. NH_3 (as NH_3-N)	mg/l	8.7	13.3	1.7	0.50	
TOTAL KN	mg/l	13.7	20.3	8.4	4.9	
SOL. KN	mg/l	11.6	17.4	4.8	2.8	
NO_2-N	mg/l			1.3		
NO_3-N	mg/l			7.0		
TOTAL-P	mg/l P	3.0		6.5	6.8	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			7,000	50	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 14, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.796			0.354	0.485
PEAK	MGD	1.232			0.382	0.959
TOTAL	MGD	1.068			0.358	0.932
TEMP.	°C	23	22	22	23	
pH		7.5	7.9	7.7	7.4	
D.O.	mg/l	1.5	4.4	4.6	3.5	
ALKALINITY (as $CaCO_3$)	mg/l	100	145	112	83	
TOTAL BOD_5	mg/l	130	62	45	20	
SOL.BOD_5	mg/l	63	33	27	10	
TOTAL COD	mg/l	166	142	72	123	
SOL.COD	mg/l	81	54	46	46	
TOTAL SS	mg/l	183	113	53	110	
VOL. SS	mg/l	99	81	32	94	
TOTAL NH_3 (as NH_3-N)	mg/l	16.1	17.2	7.9	4.4	
SOL. NH_3 (as NH_3-N)	mg/l	9.2	16.7	7.1	4.3	
TOTAL KN	mg/l	17.2	28.0	13.4	11.2	
SOL. KN	mg/l	12.6	21.3	10.6	8.2	
NO_2-N	mg/l			0.81		
NO_3-N	mg/l			4.1		
TOTAL-P	mg/l P	5.5		11.5	9.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			220,000	7,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 15, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.356			0.274	0.587
PEAK	MGD	0.986			0.382	0.959
TOTAL	MGD	0.739			0.380	0.864
TEMP.	°C	23	23	23	23	
pH		7.5	7.5	7.7	7.6	
D.O.	mg/l	1.0	4.0	4.4	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	140	143	112	103	
TOTAL BOD_5	mg/l	174	57	38	13	
SOL. BOD_5	mg/l	72	24	16	8	
TOTAL COD	mg/l	243	92	57	47	
SOL. COD	mg/l	142	35	38	38	
TOTAL SS	mg/l	181	57	46	33	
VOL. SS	mg/l	93	31	26	22	
TOTAL NH_3 (as NH_3-N)	mg/l	11.9	12.8	7.3	6.8	
SOL. NH_3 (as NH_3-N)	mg/l	11.2	12.2	6.9	5.5	
TOTAL KN	mg/l	22.0	20.7	12.9	10.1	
SOL. KN	mg/l	13.9	16.8	10.6	8.7	
NO_2-N	mg/l			0.92		
NO_3-N	mg/l			3.5		
TOTAL-P	mg/l P	8.5		7.9	9.4	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			23,000	900	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 16, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.396			0.160	0.455
PEAK	MGD	0.860			0.300	0.775
TOTAL	MGD	0.763			0.261	0.704
TEMP.	°C	24	24	24	24	
pH		7.2	7.6	7.4	7.6	
D.O.	mg/l	0.0	2.4	3.7	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	147	139	108	98	
TOTAL BOD_5	mg/l	150	71	33	14	
SOL.BOD_5	mg/l	79	41	21	6	
TOTAL COD	mg/l	279	95	78	54	
SOL.COD	mg/l	95	63	44	43	
TOTAL SS	mg/l	47	42	36	20	
VOL. SS	mg/l	44	21	19	13	
TOTAL NH_3 (as NH_3-N)	mg/l	14.7	14.0	7.3	5.9	
SOL. NH_3 (as NH_3-N)	mg/l	10.0	9.8	6.8	5.6	
TOTAL KN	mg/l	25.8	21.3	13.2	10.0	
SOL. KN	mg/l	17.9	18.2	11.1	8.7	
NO_2-N	mg/l			1.2		
NO_3-N	mg/l			3.9		
TOTAL-P	mg/l P	12.8		9.9	10.9	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			700,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 17, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.339			0.129	0.485
PEAK	MGD	0.835			0.231	0.775
TOTAL	MGD	0.721			0.198	0.702
TEMP.	°C	24	23	23	21	
pH		7.5	7.6	7.6	7.6	
D.O.	mg/l	0.0	1.4	4.7	4.0	
ALKALINITY (as $CaCO_3$)	mg/l	148	145	106	102	
TOTAL BOD_5	mg/l	182	76	52	25	
SOL.BOD_5	mg/l	85	22	18	13	
TOTAL COD	mg/l	233	109	67	65	
SOL.COD	mg/l	108	33	39	46	
TOTAL SS	mg/l	158	42	40	24	
VOL. SS	mg/l	96	39	28	22	
TOTAL NH_3 (as NH_3-N)	mg/l	14.7	14.7	6.4	5.7	
SOL. NH_3 (as NH_3-N)	mg/l	11.2	10.6	5.4	5.0	
TOTAL KN	mg/l	23.7	16.1	10.4	8.8	
SOL. KN	mg/l	12.0	15.6	8.5	7.3	
NO_2-N	mg/l			1.6		
NO_3-N	mg/l			3.3		
TOTAL-P	mg/l P	10.9		6.5	6.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			700,000	2,600	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 18, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.282			0.151	0.348
PEAK	MGD	0.689			0.194	0.586
TOTAL	MGD	0.571			0.169	0.502
TEMP.	^{o}C	24	23	23	22	
pH		7.6	7.6	7.4	7.5	
D.O.	mg/1	0.7	2.4	3.3	2.3	
ALKALINITY (as $CaCO_3$)	mg/1	182	150	104	111	
TOTAL BOD_5	mg/1	244	48	57	25	
SOL.BOD_5	mg/1	67	33	24	13	
TOTAL COD	mg/1	344	89	161	82	
SOL.COD	mg/1	72	43	39	66	
TOTAL SS	mg/1	157	46	52	31	
VOL. SS	mg/1	122	37	28	20	
TOTAL NH_3 (as NH_3-N)	mg/1	27.3	14.6	5.9	6.2	
SOL. NH_3 (as NH_3-N)	mg/1	21.2	11.8	4.8	6.0	
TOTAL KN	mg/1	40.7	22.5	12.4	10.5	
SOL. KN	mg/1	23.8	19.3	9.6	9.7	
NO_2-N	mg/1			2.0		
NO_3-N	mg/1			3.9		
TOTAL-P	mg/1 P	10.8		9.1	8.2	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			380,000	3,000	
ALGAE CELL CT.	#/ml		59,094	133,000	89,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 19, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.343			0.129	0.348
PEAK	MGD	0.885			0.231	0.831
TOTAL	MGD	0.628			0.211	0.586
TEMP.	^oC	24	23	23	22	
pH		7.7	7.4	7.4	7.4	
D.O.	mg/l	0.6	5.6	4.5	3.0	
ALKALINITY (as $CaCO_3$)	mg/l	180	152	101	108	
TOTAL BOD_5	mg/l	186	43	56	30	
SOL.BOD_5	mg/l	96	29	44	18	
TOTAL COD	mg/l	390	168	271	61	
SOL.COD	mg/l	123	74	77	39	
TOTAL SS	mg/l	60	18	41	17	
VOL. SS	mg/l	52	13	29	12	
TOTAL NH_3 (as NH_3-N)	mg/l	27.0	16.1	5.0	6.0	
SOL. NH_3 (as NH_3-N)	mg/l	16.8	11.8	3.6	5.1	
TOTAL KN	mg/l	39.9	33.6	11.2	10.2	
SOL. KN	mg/l	32.9	19.6	8.5	9.5	
NO_2-N	mg/l			2.5		
NO_3-N	mg/l			3.5		
TOTAL-P	mg/l P	8.1		7.5	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			86,000	11,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: MAY 20, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.384			0.114	0.348
PEAK	MGD	0.836			0.274	0.703
TOTAL	MGD	0.687			0.248	0.635
TEMP.	°C	24	23	23	22	
pH		7.4	7.7	7.5	7.6	
D.O.	mg/l	0.7	2.6	4.2	1.4	
ALKALINITY (as $CaCO_3$)	mg/l	173	152	99	109	
TOTAL BOD_5	mg/l	161	51	37	22	
SOL.BOD_5	mg/l	70	35	25	17	
TOTAL COD	mg/l	380	145	74	48	
SOL.COD	mg/l	90	93	39	35	
TOTAL SS	mg/l	230	37	45	31	
VOL. SS	mg/l	161	25	32	21	
TOTAL NH_3 (as NH_3-N)	mg/l	23.7	15.7	4.4	5.8	
SOL. NH_3 (as NH_3-N)	mg/l	20.8	13.2	3.4	5.2	
TOTAL KN	mg/l	36.8	22.1	10.9	9.6	
SOL. KN	mg/l	29.7	20.4	8.3	8.3	
NO_2-N	mg/l			2.2		
NO_3-N	mg/l			4.8		
TOTAL-P	mg/l P	13.0		10.1	7.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			220,000	10,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 11, 1976 FRIDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.413			0.084	0.848
PEAK	MGD	0.657			0.151	0.643
TOTAL	MGD	0.646			0.090	0.593
TEMP.	^{o}C	25	26	26	26	
pH		7.2	7.4	7.4	7.3	
D.O.	mg/1	0.0	2.1	4.6	4.5	
ALKALINITY (as $CaCO_3$)	mg/1	147	83	115	108	
TOTAL BOD_5	mg/1	199	79	67	23	
SOL.BOD_5	mg/1	89	53	38	14	
TOTAL COD	mg/1	402	128	79	69	
SOL.COD	mg/1	148	72	52	42	
TOTAL SS	mg/1	137	125	68	30	
VOL. SS	mg/1	97	96	44	16	
TOTAL NH_3 (as NH_3-N)	mg/1	18.2	0.7	6.0	4.4	
SOL. NH_3 (as NH_3-N)	mg/1	17.4	0.7	4.7	2.6	
TOTAL KN	mg/1	29.4	9.8	10.9	9.5	
SOL. KN	mg/1	24.5	6.4	7.8	8.3	
NO_2-N	mg/1			1.4		
NO_3-N	mg/1			2.0		
TOTAL-P	mg/1 P	6.3		7.2	7.9	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			640,000	6,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 12, 1976 SATURDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.447			0.094	0.485
PEAK	MGD	0.719			0.160	0.703
TOTAL	MGD	0.682			0.146	0.613
TEMP.	°C	26	28	28	26	
pH		7.1	7.3	7.3	7.2	
D.O.	mg/l	0.6	2.8	2.0	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	115	95	93	105	
TOTAL BOD_5	mg/l	183	53	57	21	
SOL.BOD_5	mg/l	66	28	22	121	
TOTAL COD	mg/l	352	124	86	60	
SOL.COD	mg/l	73	41	54	54	
TOTAL SS	mg/l	209	125	59	32	
VOL. SS	mg/l	114	63	28	16	
TOTAL NH_3 (as NH_3-N)	mg/l	10.5	3.2	2.4	4.9	
SOL. NH_3 (as NH_3-N)	mg/l	9.7	1.7	2.2	4.5	
TOTAL KN	mg/l	21.4	10.1	9.2	8.6	
SOL. KN	mg/l	14.3	4.3	5.9	7.4	
NO_2-N	mg/l			1.2		
NO_3-N	mg/l			1.7		
TOTAL-P	mg/l P	8.1		7.4	7.5	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			390,000	5,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 13, 1976 SUNDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.472			0.114	0.455
PEAK	MGD	0.770			0.129	0.703
TOTAL	MGD	0.736			0.114	0.659
TEMP.	^oC	26	28	29	26	
pH		7.2	7.3	7.4	7.3	
D.O.	mg/l	0.4	3.4	2.8	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	138	92	93	95	
TOTAL BOD_5	mg/l	183	60	54	22	
SOL.BOD_5	mg/l	72	35	28	12	
TOTAL COD	mg/l	313	98	92	73	
SOL.COD	mg/l	95	44	38	63	
TOTAL SS	mg/l	219	72	48	28	
VOL. SS	mg/l	148	43	29	16	
TOTAL NH_3 (as NH_3-N)	mg/l	14.7	2.4	2.7	4.3	
SOL. NH_3 (as NH_3-N)	mg/l	13.6	1.8	2.6	4.0	
TOTAL KN	mg/l	25.3	8.7	9.2	7.1	
SOL. KN	mg/l	16.5	4.3	5.9	6.9	
NO_2-N	mg/l			0.92		
NO_3-N	mg/l			0.64		
TOTAL-P	mg/l P	8.1		7.4	6.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			58,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 14, 1976 MONDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.654			0.084	0.455
PEAK	MGD	0.853			0.151	0.831
TOTAL	MGD	0.853			0.121	0.789
TEMP.	^{o}C	27	28	29	27	
pH		7.1	7.5	7.5	7.3	
D.O.	mg/l	0.8	3.6	2.4	0.7	
ALKALINITY (as $CaCO_3$)	mg/l	131	96	101	108	
TOTAL BOD_5	mg/l	85	50	43	28	
SOL.BOD_5	mg/l	44	32	21	13	
TOTAL COD	mg/l	107	82	82	57	
SOL.COD	mg/l	64	44	35	41	
TOTAL SS	mg/l	138	51	46	18	
VOL. SS	mg/l	89	37	32	17	
TOTAL NH_3 (as NH_3-N)	mg/l	13.9	1.5	2.5	4.6	
SOL. NH_3 (as NH_3-N)	mg/l	13.0	1.3	2.3	3.5	
TOTAL KN	mg/l	21.0	7.8	9.5	7.9	
SOL. KN	mg/l	18.3	3.9	6.0	6.6	
NO_2-N	mg/l			0.70		
NO_3-N	mg/l			0.64		
TOTAL-P	mg/l P	5.5		8.7	8.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			45,000	2,500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 15, 1976 TUESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.608			0.071	0.703
PEAK	MGD	0.843			0.084	0.831
TOTAL	MGD	0.831			0.081	0.760
TEMP.	°C	27	29	29	28	
pH		7.1	7.4	7.4	7.3	
D.O.	mg/l	1.4	3.2	2.6	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	146	98	101	105	
TOTAL BOD_5	mg/l	187	85	71	18	
SOL.BOD_5	mg/l	99	34	28	11	
TOTAL COD	mg/l	539	101	79	67	
SOL.COD	mg/l	108	45	35	44	
TOTAL SS	mg/l	450	148	33	46	
VOL. SS	mg/l	297	63	10	28	
TOTAL NH_3 (as NH_3-N)	mg/l	13.6	1.5	2.5	3.7	
SOL. NH_3 (as NH_3-N)	mg/l	13.3	1.4	2.4	3.4	
TOTAL KN	mg/l	31.2	10.2	9.5	7.9	
SOL. KN	mg/l	17.2	4.9	6.0	6.8	
NO_2-N	mg/l			0.54		
NO_3-N	mg/l			1.6		
TOTAL-P	mg/l P	11.7		7.6	7.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			33,000	4,500	
ALGAE CELL CT.	#/ml		53,000	83,000	73,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 16, 1976 WEDNESDAY

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.635			0.114	0.393
PEAK	MGD	0.827			0.159	0.776
TOTAL	MGD	0.793			0.139	0.729
TEMP.	°C	26	27	27	27	
pH		7.1	7.2	7.3	7.3	
D.O.	mg/l	1.6	2.7	3.4	2.6	
ALKALINITY (as $CaCO_3$)	mg/l	146	99	94	97	
TOTAL BOD_5	mg/l	197	79	44	18	
SOL. BOD_5	mg/l	79	36	30	14	
TOTAL COD	mg/l	489	107	69	45	
SOL.COD	mg/l	94	35	38	21	
TOTAL SS	mg/l	407	98	117	74	
VOL. SS	mg/l	257	93	101	69	
TOTAL NH_3 (as NH_3-N)	mg/l	16.0	1.5	2.8	3.1	
SOL. NH_3 (as NH_3-N)	mg/l	13.6	0.80	2.5	2.7	
TOTAL KN	mg/l	36.4	10.6	9.4	7.7	
SOL. KN	mg/l	18.1	4.5	6.0	6.7	
NO_2-N	mg/l			0.06		
NO_3-N	mg/l			1.1		
TOTAL-P	mg/l P	10.1		6.3	6.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			25,000	3,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: JUNE 17, 1976 THURSDAY

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.518			0.094	0.485
PEAK	MGD	0.883			0.213	0.831
TOTAL	MGD	0.869			0.187	0.817
TEMP.	^oC	26	28	28	28	
pH		7.1	7.2	7.4	7.4	
D.O.	mg/l	1.2	2.8	3.6	2.3	
ALKALINITY (as $CaCO_3$)	mg/l	94	90	95	96	
TOTAL BOD_5	mg/l	164	59	55	32	
SOL.BOD_5	mg/l	46	38	34	21	
TOTAL COD	mg/l	313	65	82	71	
SOL.COD	mg/l	61	44	41	51	
TOTAL SS	mg/l	341	65	39	35	
VOL. SS	mg/l	169	45	31	29	
TOTAL NH_3 (as NH_3-N)	mg/l	9.4	1.5	2.5	3.5	
SOL. NH_3 (as NH_3-N)	mg/l	8.4	1.4	2.4	3.5	
TOTAL KN	mg/l	21.3	7.8	9.1	7.6	
SOL. KN	mg/l	12.7	4.5	5.5	6.4	
NO_2-N	mg/l			0.56		
NO_3-N	mg/l			0.65		
TOTAL-P	mg/l P	15.2		8.0	7.1	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			530,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 1, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.672			0.151	0.455
PEAK	MGD	0.870			0.274	0.831
TOTAL	MGD	0.859			0.237	0.797
TEMP.	°C	27	28	29	28	
pH		6.9	7.4	7.5	7.4	
D.O.	mg/l	0.4	4.0	2.6	2.2	
ALKALINITY (as $CaCO_3$)	mg/l	117	79	100	95	
TOTAL BOD_5	mg/l	91	63	43	29	
SOL.BOD_5	mg/l	48	28	22	18	
TOTAL COD	mg/l	138	92	66	66	
SOL.COD	mg/l	63	40	49	46	
TOTAL SS	mg/l	92	83	28	34	
VOL. SS	mg/l	67	48	17	25	
TOTAL NH_3 (as NH_3-N)	mg/l	8.5	1.1	4.5	4.0	
SOL. NH_3 (as NH_3-N)	mg/l	8.3	0.67	4.3	3.9	
TOTAL KN	mg/l	18.6	7.7	8.4	7.6	
SOL. KN	mg/l	13.3	5.9	7.3	7.1	
NO_2-N	mg/l			0.34		
NO_3-N	mg/l			0.56		
TOTAL-P	mg/l P	3.7		7.6	7.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			320,000	65,000	
ALGAE CELL CT.	#/ml		85,000	71,700	57,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 2, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.702			0.212	0.485
PEAK	MGD	1.000			0.329	0.911
TOTAL	MGD	0.982			0.265	0.903
TEMP.	^{o}C	27	29	29	28	
pH		7.2	7.2	7.3	7.1	
D.O.	mg/l	1.2	2.9	2.7	1.8	
ALKALINITY (as $CaCO_3$)	mg/l	121	78	99	97	
TOTAL BOD_5	mg/l	169	57	41	23	
SOL. BOD_5	mg/l	56	31	29	12	
TOTAL COD	mg/l	323	89	63	43	
SOL.COD	mg/l	66	43	43	36	
TOTAL SS	mg/l	46	64	45	45	
VOL. SS	mg/l	31	44	29	29	
TOTAL NH_3 (as NH_3-N)	mg/l	9.1	2.4	4.5	4.2	
SOL. NH_3 (as NH_3-N)	mg/l	8.0	2.1	3.9	3.9	
TOTAL KN	mg/l	16.5	8.7	10.1	8.4	
SOL. KN	mg/l	11.8	4.1	7.5	7.1	
NO_2-N	mg/l			0.34		
NO_3-N	mg/l			0.38		
TOTAL-P	mg/l P	5.9		7.5	7.9	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			54,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 3, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.727			0.194	0.587
PEAK	MGD	1.000			0.315	0.959
TOTAL	MGD	0.994			0.278	0.912
TEMP.	^{o}C	27	29	29	28	
pH		7.2	7.2	7.3	7.4	
D.O.	mg/l	2.0	3.6	2.0	2.2	
ALKALINITY (as $CaCO_3$)	mg/l	106	80	98	92	
TOTAL BOD_5	mg/l	116	57	28	17	
SOL.BOD_5	mg/l	47	20	16	10	
TOTAL COD	mg/l	175	84	59	52	
SOL.COD	mg/l	56	35	35	35	
TOTAL SS	mg/l	137	56	35	16	
VOL. SS	mg/l	69	39	28	12	
TOTAL NH_3 (as NH_3-N)	mg/l	9.2	1.5	4.2	3.8	
SOL. NH_3 (as NH_3-N)	mg/l	9.0	1.1	4.1	3.6	
TOTAL KN	mg/l	16.8	7.8	9.2	7.2	
SOL. KN	mg/l	11.8	4.9	7.2	6.7	
NO_2-N	mg/l			0.39		
NO_3-N	mg/l			0.48		
TOTAL-P	mg/l P	6.4		7.3	6.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			110,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 4, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.721			0.160	0.455
PEAK	MGD	0.982			0.274	0.911
TOTAL	MGD	0.963			0.251	0.887
TEMP.	^oC	27	29	29	29	
pH		7.3	7.4	7.3	7.4	
D.O.	mg/l	0.5	1.5	1.2	4.5	
ALKALINITY (as $CaCO_3$)	mg/l	106	74	95	85	
TOTAL BOD_5	mg/l	98	49	48	30	
SOL.BOD_5	mg/l	41	20	16	8	
TOTAL COD	mg/l	140	63	52	38	
SOL.COD	mg/l	68	52	24	17	
TOTAL SS	mg/l	134	51	38	20	
VOL. SS	mg/l	86	40	26	14	
TOTAL NH_3 (as NH_3-N)	mg/l	10.6	2.1	4.2	3.6	
SOL. NH_3 (as NH_3-N)	mg/l	10.2	1.1	4.1	3.4	
TOTAL KN	mg/l	17.1	7.3	9.4	7.5	
SOL. KN	mg/l	12.7	3.6	6.7	5.9	
NO_2-N	mg/l			0.35		
NO_3-N	mg/l			0.52		
TOTAL-P	mg/l P	6.9		7.1	6.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			81,000	1,000	
ALGAE CELL CT.	#/ml		72,600	144,000	66,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 5, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.676			0.160	0.393
PEAK	MGD	0.981			0.300	0.959
TOTAL	MGD	0.974			0.267	0.896
TEMP.	^{o}C	28	28	28	27	
pH		7.5	7.4	7.5	7.3	
D.O.	mg/l	1.4	2.6	2.2	1.8	
ALKALINITY (as $CaCO_3$)	mg/l	120	76	92	92	
TOTAL BOD_5	mg/l	135	70	31	16	
SOL. BOD_5	mg/l	73	44	20	13	
TOTAL COD	mg/l	237	87	42	32	
SOL. COD	mg/l	35	38	24	38	
TOTAL SS	mg/l	193	60	89	31	
VOL. SS	mg/l	117	38	82	18	
TOTAL NH_3 (as NH_3-N)	mg/l	10.9	2.7	3.9	3.9	
SOL. NH_3 (as NH_3-N)	mg/l	10.2	2.4	3.7	3.8	
TOTAL KN	mg/l	18.9	7.3	9.5	8.1	
SOL. KN	mg/l	15.3	3.6	7.3	6.6	
NO_2-N	mg/l			0.39		
NO_3-N	mg/l			0.48		
TOTAL-P	mg/l P	5.8		5.6	6.7	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			70,000	600	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 6, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.646			0.151	0.455
PEAK	MGD	0.920			0.231	0.831
TOTAL	MGD	0.908			0.224	0.823
TEMP.	°C	28	28	28	27	
pH		7.4	7.2	7.4	7.3	
D.O.	mg/l	1.0	2.6	2.2	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	107	74	91	94	
TOTAL BOD_5	mg/l	128	67	38	20	
SOL.BOD_5	mg/l	46	28	23	9	
TOTAL COD	mg/l	155	79	72	62	
SOL.COD	mg/l	62	45	28	34	
TOTAL SS	mg/l	225	95	66	35	
VOL. SS	mg/l	75	39	25	11	
TOTAL NH_3 (as NH_3-N)	mg/l	9.2	1.7	3.7	5.0	
SOL. NH_3 (as NH_3-N)	mg/l	8.7	1.4	3.5	4.6	
TOTAL KN	mg/l	16.0	7.7	8.7	7.6	
SOL. KN	mg/l	11.9	3.9	6.2	6.7	
NO_2-N	mg/l			0.55		
NO_3-N	mg/l			0.89		
TOTAL-P	mg/l P	6.4		6.4	6.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			74,000	1,700	
ALGAE CELL CT.	#/ml		186,000	200,000	94,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 7, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.632			0.114	0.485
PEAK	MGD	0.891			0.274	0.831
TOTAL	MGD	0.875			0.243	0.793
TEMP.	^oC	27	28	28	27	
pH		7.3	7.3	7.4	7.5	
D.O.	mg/1	0.6	3.6	2.0	1.2	
ALKALINITY (as $CaCO_3$)	mg/1	111	76	90	94	
TOTAL BOD_5	mg/1	147	58	54	28	
SOL.BOD_5	mg/1	62	34	30	27	
TOTAL COD	mg/1	177	100	83	66	
SOL.COD	mg/1	76	42	66	38	
TOTAL SS	mg/1	131	71	62	31	
VOL. SS	mg/1	61	37	24	18	
TOTAL NH_3 (as NH_3-N)	mg/1	10.9	2.1	3.5	4.6	
SOL. NH_3 (as NH_3-N)	mg/1	9.9	1.4	3.4	4.4	
TOTAL KN	mg/1	16.6	6.7	8.2	8.0	
SOL. KN	mg/1	12.9	3.1	5.6	6.7	
NO_2-N	mg/1			0.63		
NO_3-N	mg/1			0.94		
TOTAL-P	mg/1 P	6.0		6.4	6.2	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			90,000	5,200	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 8, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.592			0.129	0.393
PEAK	MGD	0.882			0.255	0.776
TOTAL	MGD	0.846			0.229	0.761
TEMP.	^oC	27	28	29	27	
pH		6.9	7.1	7.3	7.4	
D.O.	mg/l	0.6	2.4	1.9	1.8	
ALKALINITY (as $CaCO_3$)	mg/l	120	81	87	92	
TOTAL BOD_5	mg/l	160	48	35	25	
SOL.BOD_5	mg/l	60	28	26	15	
TOTAL COD	mg/l	327	83	77	69	
SOL.COD	mg/l	7.6	35	32	17	
TOTAL SS	mg/l	221	68	39	48	
VOL. SS	mg/l	137	44	30	18	
TOTAL NH_3 (as NH_3-N)	mg/l	12.7	1.5	2.7	4.1	
SOL. NH_3 (as NH_3-N)	mg/l	12.3	1.1	2.5	3.7	
TOTAL KN	mg/l	22.4	7.7	8.2	8.0	
SOL. KN	mg/l	17.0	4.1	5.6	6.6	
NO_2-N	mg/l			0.34		
NO_3-N	mg/l			0.85		
TOTAL-P	mg/l P	6.3		5.4	5.9	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			107,000	6,200	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 9, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.675			0.151	0.348
PEAK	MGD	0.960			0.274	0.911
TOTAL	MGD	0.949			0.253	0.863
TEMP.	^{o}C	27	29	29	28	
pH		7.4	7.7	7.6	7.3	
D.O.	mg/1	0.6	5.0	2.4	2.0	
ALKALINITY (as $CaCO_3$)	mg/1	112	83	87	92	
TOTAL BOD_5	mg/1	130	33	27	20	
SOL.BOD_5	mg/1	46	21	15	11	
TOTAL COD	mg/1	149	87	62	66	
SOL.COD	mg/1	68	35	35	38	
TOTAL SS	mg/1	128	72	53	38	
VOL. SS	mg/1	86	41	29	17	
TOTAL NH_3 (as NH_3-N)	mg/1	13.3	2.4	2.5	3.5	
SOL. NH_3 (as NH_3-N)	mg/1	12.6	1.7	2.3	2.5	
TOTAL KN	mg/1	25.1	7.1	6.7	5.9	
SOL. KN	mg/1	19.4	3.7	3.6	4.8	
NO_2-N	mg/1			0.35		
NO_3-N	mg/1			0.77		
TOTAL-P	mg/1 P	5.4		6.3	7.0	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			96,000	1,300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 10, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.650			0.129	0.455
PEAK	MGD	0.438			0.255	0.831
TOTAL	MGD	0.895			0.236	0.803
TEMP.	^{o}C	27	29	29	28	
pH		6.7	7.1	7.2	7.3	
D.O.	mg/l	1.2	2.4	1.3	2.0	
ALKALINITY (as $CaCO_3$)	mg/l	110	83	86	91	
TOTAL BOD_5	mg/l	146	35	25	16	
SOL. BOD_5	mg/l	78	20	11	8	
TOTAL COD	mg/l	171	81	61	37	
SOL.COD	mg/l	96	34	31	27	
TOTAL SS	mg/l	93	38	23	14	
VOL. SS	mg/l	74	28	17	4	
TOTAL NH_3 (as NH_3-N)	mg/l	12.0	2.8	3.4	7.5	
SOL. NH_3 (as NH_3-N)	mg/l	11.8	2.5	3.2	7.4	
TOTAL KN	mg/l	21.8	9.2	8.0	14.5	
SOL. KN	mg/l	20.2	4.7	5.2	11.8	
NO_2-N	mg/l			0.41		
NO_3-N	mg/l			0.95		
TOTAL-P	mg/l P	2.0		6.3	6.5	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			116,000	1,900	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 11, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.686			0.151	0.485
PEAK	MGD	0.877			0.212	0.831
TOTAL	MGD	0.883			0.198	0.786
TEMP.	^{o}C	27	29	28	28	
pH		7.1	7.3	7.4	7.3	
D.O.	mg/l	0.4	1.0	1.6	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	108	84	89	87	
TOTAL BOD_5	mg/l	230	53	34	24	
SOL.BOD_5	mg/l	40	28	15	12	
TOTAL COD	mg/l	310	77	43	37	
SOL.COD	mg/l	67	33	20	20	
TOTAL SS	mg/l	79	70	46	21	
VOL. SS	mg/l	43	37	16	12	
TOTAL NH_3 (as NH_3-N)	mg/l	14.7	2.0	3.1	3.0	
SOL. NH_3 (as NH_3-N)	mg/l	14.1	1.9	2.9	2.9	
TOTAL KN	mg/l	23.0	9.1	8.4	6.5	
SOL. KN	mg/l	20.2	5.5	6.2	5.6	
NO_2-N	mg/l			0.38		
NO_3-N	mg/l			0.58		
TOTAL-P	mg/l P	4.1		6.1	6.1	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			61,000	500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 12, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.750			0.160	0.587
PEAK	MGD	1.032			0.315	0.911
TOTAL	MGD	1.002			0.278	0.896
TEMP.	°C	27	29	29	28	
pH		7.4	7.3	7.3	7.2	
D.O.	mg/l	1.0	2.8	3.0	2.0	
ALKALINITY (as $CaCO_3$)	mg/l	113	88	90	87	
TOTAL BOD_5	mg/l	173	66	44	19	
SOL.BOD_5	mg/l	84	42	32	14	
TOTAL COD	mg/l	254	89	48	40	
SOL.COD	mg/l	129	50	38	23	
TOTAL SS	mg/l	90	82	38	25	
VOL. SS	mg/l	39	52	34	21	
TOTAL NH_3 (as NH_3-N)	mg/l	11.6	3.2	3.6	3.5	
SOL. NH_3 (as NH_3-N)	mg/l	10.9	2.3	3.2	3.0	
TOTAL KN	mg/l	21.2	10.3	9.3	8.3	
SOL. KN	mg/l	15.3	6.0	7.3	6.2	
NO_2-N	mg/l			0.33		
NO_3-N	mg/l			0.48		
TOTAL-P	mg/l P	6.0		5.8	5.6	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			71,000	1,300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 13, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.634			0.129	0.485
PEAK	MGD	0.875			0.231	0.775
TOTAL	MGD	0.869			0.212	0.765
TEMP.	^oC	28	29	29	27	
pH		7.1	7.4	7.3	7.3	
D.O.	mg/l	1.0	2.0	1.6	1.6	
ALKALINITY (as $CaCO_3$)	mg/l	112	93	95	90	
TOTAL BOD_5	mg/l	232	83	46	30	
SOL.BOD_5	mg/l	70	57	33	20	
TOTAL COD	mg/l	357	108	62	49	
SOL.COD	mg/l	86	85	46	33	
TOTAL SS	mg/l	231	64	42	19	
VOL. SS	mg/l	154	43	27	12	
TOTAL NH_3 (as NH_3-N)	mg/l	11.6	2.9	3.2	3.1	
SOL. NH_3 (as NH_3-N)	mg/l	10.9	2.7	2.9	3.1	
TOTAL KN	mg/l	23.5	10.8	9.3	7.1	
SOL. KN	mg/l	12.9	6.5	6.8	5.8	
NO_2-N	mg/l			0.37		
NO_3-N	mg/l			0.23		
TOTAL-P	mg/l P	8.1		6.0	5.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			76,000	300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 14, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.654			0.114	0.587
PEAK	MGD	0.918			0.274	0.831
TOTAL	MGD	0.895			0.261	0.798
TEMP.	°C	27	29	29	28	
pH		7.1	7.3	7.3	7.4	
D.O.	mg/l	0.8	1.8	1.2	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	109	96	95	92	
TOTAL BOD_5	mg/l	178	83	50	28	
SOL.BOD_5	mg/l	74	43	29	15	
TOTAL COD	mg/l	202	99	60	36	
SOL.COD	mg/l	91	62	39	30	
TOTAL SS	mg/l	260	57	41	17	
VOL. SS	mg/l	151	39	30	12	
TOTAL NH_3 (as NH_3-N)	mg/l	11.2	4.1	4.2	4.2	
SOL. NH_3 (as NH_3-N)	mg/l	10.6	3.2	3.9	3.6	
TOTAL KN	mg/l	20.7	10.6	10.4	7.8	
SOL. KN	mg/l	13.2	7.2	8.1	6.5	
NO_2-N	mg/l			0.33		
NO_3-N	mg/l			0.19		
TOTAL-P	mg/l P	7.9		7.2	6.5	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			95,000	500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 15, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.632			0.254	0.702
PEAK	MGD	0.976			0.300	0.995
TOTAL	MGD	0.945			0.273	0.891
TEMP.	°C	27	28	28	27	
pH		7.1	7.4	7.1	7.4	
D.O.	mg/l	1.6	2.2	1.6	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	103	91	91	90	
TOTAL BOD_5	mg/l	100	68	25	21	
SOL.BOD_5	mg/l	50	18	10	8	
TOTAL COD	mg/l	269	90	56	56	
SOL.COD	mg/l	60	30	30	30	
TOTAL SS	mg/l	340	39	86	47	
VOL. SS	mg/l	221	13	33	13	
TOTAL NH_3 (as NH_3-N)	mg/l	6.3	4.2	4.7	4.8	
SOL. NH_3 (as NH_3-N)	mg/l	5.6	4.2	4.3	4.3	
TOTAL KN	mg/l	14.3	10.6	9.5	9.2	
SOL. KN	mg/l	8.1	7.4	7.5	6.8	
NO_2-N	mg/l			0.27		
NO_3-N	mg/l			0.12		
TOTAL-P	mg/l P	6.7		6.5	5.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			130,000	600	
ALGAE CELL CT.	#/ml		127,000	195,000	85,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 16, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.746			0.399	0.831
PEAK	MGD	1.133			0.415	0.959
TOTAL	MGD	1.113			0.408	0.932
TEMP.	°C	28	27	27	28	
pH		7.1	7.3	7.2	7.1	
D.O.	mg/1	1.6	4.8	5.0	6.0	
ALKALINITY (as $CaCO_3$)	mg/1	122	98	100	99	
TOTAL BOD_5	mg/1	79	45	29	19	
$SOL.BOD_5$	mg/1	32	24	17	10	
TOTAL COD	mg/1	119	65	42	45	
SOL.COD	mg/1	45	39	35	26	
TOTAL SS	mg/1	199	39	26	19	
VOL. SS	mg/1	59	23	18	12	
TOTAL NH_3 (as NH_3-N)	mg/1	9.5	5.4	5.8	5.7	
SOL. NH_3 (as NH_3-N)	mg/1	9.0	5.4	5.6	5.6	
TOTAL KN	mg/1	14.4	10.4	9.9	8.7	
SOL. KN	mg/1	10.2	8.0	8.2	7.6	
NO_2-N	mg/1			0.19		
NO_3-N	mg/1			0.14		
TOTAL-P	mg/1 P	5.9		6.9	6.6	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			63,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 17, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.660			0.354	0.911
PEAK	MGD	1.117			0.394	0.911
TOTAL	MGD	1.011			0.418	0.911
TEMP.	^oC	25	24	25	25	
pH		7.1	7.3	7.1	7.2	
D.O.	mg/l	4.0	6.0	6.9	7.2	
ALKALINITY (as $CaCO_3$)	mg/l	113	95	93	90	
TOTAL BOD_5	mg/l	66	29	27	21	
SOL.BOD_5	mg/l	33	19	16	14	
TOTAL COD	mg/l	95	47	54	47	
SOL.COD	mg/l	50	38	41	28	
TOTAL SS	mg/l	56	31	22	13	
VOL. SS	mg/l	34	22	14	9	
TOTAL NH_3 (as NH_3-N)	mg/l	8.2	5.6	5.4	5.2	
SOL. NH_3 (as NH_3-N)	mg/l	7.6	5.6	5.1	4.9	
TOTAL KN	mg/l	14.6	2.5	11.2	9.6	
SOL. KN	mg/l	11.3	2.3	9.0	7.6	
NO_2-N	mg/l			0.24		
NO_3-N	mg/l			0.18		
TOTAL-P	mg/l P	3.4		7.1	6.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			54,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 18, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.297			0.231	0.348
PEAK	MGD	0.770			0.315	0.643
TOTAL	MGD	0.680			0.318	0.602
TEMP.	°C	27	28	28	27	
pH		7.1	7.2	7.3	7.2	
D.O.	mg/l	0.8	2.2	2.8	1.1	
ALKALINITY (as $CaCO_3$)	mg/l	110	89	99	96	
TOTAL BOD_5	mg/l	144	43	32	23	
SOL.BOD_5	mg/l	46	26	24	18	
TOTAL COD	mg/l	203	58	49	43	
SOL.COD	mg/l	65	34	40	34	
TOTAL SS	mg/l	287	38	28	50	
VOL. SS	mg/l	180	20	18	12	
TOTAL NH_3 (as NH_3-N)	mg/l	11.4	5.7	5.7	5.6	
SOL. NH_3 (as NH_3-N)	mg/l	11.0	5.4	5.7	5.4	
TOTAL KN	mg/l	21.1	10.6	11.1	8.4	
SOL. KN	mg/l	14.1	8.3	8.7	8.0	
NO_2-N	mg/l			0.17		
NO_3-N	mg/l			0.16		
TOTAL-P	mg/l P	8.8		6.6	7.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			220,000	700	
ALGAE CELL CT.	#/ml		75,000	89,000	81,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 19, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.627			0.231	0.456
PEAK	MGD	1.052			0.274	0.831
TOTAL	MGD	0.903			0.246	0.822
TEMP.	°C	26	28	28	27	
pH		7.1	7.2	7.2	7.3	
D.O.	mg/1	1.4	1.8	3.0	1.2	
ALKALINITY (as $CaCO_3$)	mg/1	116	102	104	98	
TOTAL BOD_5	mg/1	116	55	25	18	
SOL.BOD_5	mg/1	60	32	17	11	
TOTAL COD	mg/1	191	74	52	58	
SOL.COD	mg/1	89	52	46	37	
TOTAL SS	mg/1	254	21	30	22	
VOL. SS	mg/1	170	12	15	10	
TOTAL NH_3 (as NH_3-N)	mg/1	10.4	6.6	6.4	5.7	
SOL. NH_3 (as NH_3-N)	mg/1	10.2	6.6	6.0	5.6	
TOTAL KN	mg/1	18.7	12.3	10.6	9.3	
SOL. KN	mg/1	12.9	10.5	9.5	7.7	
NO_2-N	mg/1			0.22		
NO_3-N	mg/1			0.23		
TOTAL-P	mg/1 P	6.9		6.3	6.5	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			130,000	500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 20, 1976 Tuesday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.610			0.194	0.485
PEAK	MGD	0.986			0.274	0.911
TOTAL	MGD	0.920			0.256	0.819
TEMP.	^oC	23	25	26	25	
pH		7.1	7.3	7.4	7.3	
D.O.	mg/l	1.0	3.6	3.4	2.3	
ALKALINITY (as $CaCO_3$)	mg/l	121	95	100	98	
TOTAL BOD_5	mg/l	84	30	13	8	
SOL.BOD_5	mg/l	41	12	5	3	
TOTAL COD	mg/l	182	89	46	37	
SOL.COD	mg/l	77	46	34	28	
TOTAL SS	mg/l	211	47	26	212	
VOL. SS	mg/l	128	24	14	11	
TOTAL NH_3 (as NH_3-N)	mg/l	11.4	5.6	6.2	6.1	
SOL. NH_3 (as NH_3-N)	mg/l	10.6	5.6	6.1	6.0	
TOTAL KN	mg/l	20.5	12.8	10.9	9.9	
SOL. KN	mg/l	14.4	9.5	9.0	8.0	
NO_2-N	mg/l			0.19		
NO_3-N	mg/l			0.33		
TOTAL-P	mg/l P	8.7		6.7	6.5	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			60,000	350	
ALGAE CELL CT.	#/ml		161,000	116,000	106,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 21, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.371			0.114	0.393
PEAK	MGD	0.802			0.194	0.643
TOTAL	MGD	0.761			0.173	0.610
TEMP.	°C	28	30	30	28	
pH		6.9	7.2	7.3	7.1	
D.O.	mg/l	0.6	3.2	2.2	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	113	96	100	98	
TOTAL BOD_5	mg/l	88	57	46	15	
SOL.BOD_5	mg/l	45	25	14	13	
TOTAL COD	mg/l	119	79	58	37	
SOL.COD	mg/l	55	49	37	33	
TOTAL SS	mg/l	243	58	31	21	
VOL. SS	mg/l	137	36	22	16	
TOTAL NH_3 (as NH_3-N)	mg/l	11.4	6.2	6.5	7.1	
SOL. NH_3 (as NH_3-N)	mg/l	10.6	6.0	6.3	6.5	
TOTAL KN	mg/l	16.8	12.2	11.8	9.7	
SOL. KN	mg/l	12.9	10.0	9.0	8.5	
NO_2-N	mg/l			0.38		
NO_3-N	mg/l			0.25		
TOTAL-P	mg/l P	6.6		7.3	5.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			105,000	300	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 22, 1976 Thursday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.568			0.194	0.455
PEAK	MGD	0.807			0.354	0.485
TOTAL	MGD	0.789			0.273	0.467
TEMP.	°C	27	30	30	27	
pH		7.0	7.3	7.2	7.1	
D.O.	mg/l	0.6	1.6	1.0	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	117	92	103	96	
TOTAL BOD_5	mg/l	103	57	32	18	
SOL. BOD_5	mg/l	68	37	17	9	
TOTAL COD	mg/l	138	81	63	51	
SOL. COD	mg/l	84	72	39	37	
TOTAL SS	mg/l	169	62	123	27	
VOL. SS	mg/l	87	26	26	13	
TOTAL NH_3 (as NH_3-N)	mg/l	14.4	5.6	6.3	6.0	
SOL. NH_3 (as NH_3-N)	mg/l	14.3	5.4	6.1	5.7	
TOTAL KN	mg/l	24.0	12.3	11.8	9.9	
SOL. KN	mg/l	19.0	8.4	9.7	8.9	
NO_2-N	mg/l			0.52		
NO_3-N	mg/l			0.30		
TOTAL-P	mg/l P	5.3		6.3	5.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			110,000	550	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 23, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.595			0.354	0.587
PEAK	MGD	0.916			0.452	0.703
TOTAL	MGD	0.859			0.357	0.679
TEMP.	°C	25	27	28	27	
pH		7.0	7.1	7.1	7.2	
D.O.	mg/l	0.8	2.6	3.1	3.5	
ALKALINITY (as $CaCO_3$)	mg/l	108	98	105	110	
TOTAL BOD_5	mg/l	103	62	31	13	
SOL.BOD_5	mg/l	76	36	16	10	
TOTAL COD	mg/l	138	99	67	70	
SOL.COD	mg/l	82	48	52	43	
TOTAL SS	mg/l	68	75	41	22	
VOL. SS	mg/l	43	37	23	9	
TOTAL NH_3 (as NH_3-N)	mg/l	11.4	5.6	5.7	6.3	
SOL. NH_3 (as NH_3-N)	mg/l	11.4	5.2	5.4	6.2	
TOTAL KN	mg/l	17.5	12.3	11.6	10.1	
SOL. KN	mg/l	14.1	8.5	8.5	7.5	
NO_2-N	mg/l			0.48		
NO_3-N	mg/l			0.17		
TOTAL-P	mg/l P	6.4		7.1	7.4	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			50,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 24, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.590			0.084	0.587
PEAK	MGD	0.891			0.114	0.703
TOTAL	MGD	0.866			0.106	0.687
TEMP.	^oC	27	30	30	27	
pH		7.4	7.3	7.3	7.0	
D.O.	mg/l	0.0	1.4	2.0	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	110	89	92	94	
TOTAL BOD_5	mg/l	129	41	29	13	
SOL.BOD_5	mg/l	41	24	12	10	
TOTAL COD	mg/l	153	66	69	51	
SOL.COD	mg/l	66	39	39	36	
TOTAL SS	mg/l	272	63	48	24	
VOL. SS	mg/l	119	29	26	12	
TOTAL NH_3 (as NH_3-N)	mg/l	10.8	3.9	5.0	6.0	
SOL. NH_3 (as NH_3-N)	mg/l	9.7	3.7	4.9	5.5	
TOTAL KN	mg/l	21.8	9.4	11.2	9.5	
SOL. KN	mg/l	14.2	7.1	8.4	7.7	
NO_2-N	mg/l			0.40		
NO_3-N	mg/l			0.21		
TOTAL-P	mg/l P	8.8		7.4	7.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			52,000	11,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 25, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.545			0.114	0.643
PEAK	MGD	0.802			0.114	0.703
TOTAL	MGD	0.778			0.114	0.691
TEMP.	^oC	27	30	29	28	
pH		7.6	7.5	7.5	7.2	
D.O.	mg/l	0.4	1.0	2.6	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	129	77	100	103	
TOTAL BOD_5	mg/l	110	38	29	17	
SOL.BOD_5	mg/l	56	26	12	10	
TOTAL COD	mg/l	174	72	69	66	
SOL.COD	mg/l	69	42	28	39	
TOTAL SS	mg/l	135	41	40	23	
VOL. SS	mg/l	83	21	28	13	
TOTAL NH_3 (as NH_3-N)	mg/l	12.4	2.6	4.8	6.0	
SOL. NH_3 (as NH_3-N)	mg/l	12.0	2.3	4.8	5.9	
TOTAL KN	mg/l	22.4	7.6	11.2	9.7	
SOL. KN	mg/l	14.8	5.2	7.8	8.7	
NO_2-N	mg/l			0.87		
NO_3-N	mg/l			0.17		
TOTAL-P	mg/l P	12.7		6.4	6.4	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			68,000	1,500	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 26, 1976 Monday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.650			0.084	0.703
PEAK	MGD	0.951			0.094	0.703
TOTAL	MGD	0.919			0.090	0.703
TEMP.	°C	27	30	30	29	
pH		7.0	7.0	7.0	6.9	
D.O.	mg/l	0.2	0.6	1.2	6.4	
ALKALINITY (as $CaCO_3$)	mg/l	116	75	96	98	
TOTAL BOD_5	mg/l	134	45	23	19	
SOL.BOD_5	mg/l	60	32	14	8	
TOTAL COD	mg/l	166	84	72	56	
SOL.COD	mg/l	72	56	38	41	
TOTAL SS	mg/l	374	32	104	17	
VOL. SS	mg/l	157	22	32	12	
TOTAL NH_3 (as NH_3-N)	mg/l	13.3	1.1	4.6	5.6	
SOL. NH_3 (as NH_3-N)	mg/l	13.2	0.5	3.5	5.2	
TOTAL KN	mg/l	23.5	6.2	10.6	10.0	
SOL. KN	mg/l	17.9	4.5	7.4	8.4	
NO_2-N	mg/l			1.1		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	6.8		7.6	6.6	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			100,000	600	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 27, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.708			0.315	0.703
PEAK	MGD	1.027			0.354	0.831
TOTAL	MGD	0.955			0.319	0.796
TEMP.	°C	28	30	30	30	
pH		7.5	7.3	7.3	7.0	
D.O.	mg/l	0.4	1.2	1.2	0.5	
ALKALINITY (as $CaCO_3$)	mg/l	123	68	99	107	
TOTAL BOD_5	mg/l	136	30	25	13	
SOL.BOD_5	mg/l	45	23	18	7	
TOTAL COD	mg/l	179	53	69	41	
SOL.COD	mg/l	63	38	34	38	
TOTAL SS	mg/l	310	39	52	23	
VOL. SS	mg/l	146	30	29	14	
TOTAL NH_3 (as NH_3-N)	mg/l	11.8	2.1	4.2	6.2	
SOL. NH_3 (as NH_3-N)	mg/l	10.4	1.3	3.5	5.4	
TOTAL KN	mg/l	22.9	6.7	10.6	10.5	
SOL. KN	mg/l	14.8	4.7	7.3	8.9	
NO_2-N	mg/l			1.0		
NO_3-N	mg/l			0.3		
TOTAL-P	mg/l P	8.6		8.6	9.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			260,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 28, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.719			0.274	0.831
PEAK	MGD	1.025			0.315	0.995
TOTAL	MGD	0.970			0.286	0.902
TEMP.	°C	29	31	31	29	
pH		7.0	7.1	7.1	6.9	
D.O.	mg/l	0.0	1.4	0.8	0.4	
ALKALINITY (as $CaCO_3$)	mg/l	155	78	102	106	
TOTAL BOD_5	mg/l	150	48	41	26	
SOL.BOD_5	mg/l	59	34	23	18	
TOTAL COD	mg/l	154	72	78	56	
SOL.COD	mg/l	76	48	31	31	
TOTAL SS	mg/l	354	45	99	14	
VOL. SS	mg/l	192	30	38	21	
TOTAL NH_3 (as NH_3-N)	mg/l	17.5	0.7	3.6	5.3	
SOL. NH_3 (as NH_3-N)	mg/l	14.0	0.2	2.8	5.1	
TOTAL KN	mg/l	27.4	9.4	11.2	10.2	
SOL. KN	mg/l	21.5	7.5	6.4	8.0	
NO_2-N	mg/l			2.8		
NO_3-N	mg/l			0.16		
TOTAL-P	mg/l P	8.8		7.6	6.9	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			11,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 29, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.802			0.194	0.455
PEAK	MGD	1.07			0.274	0.831
TOTAL	MGD	1.02			0.216	0.774
TEMP.	°C	24	27	27	26	
pH		7.0	7.1	7.2	7.3	
D.O.	mg/l	0.6	2.0	1.0	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	144	83	104	100	
TOTAL BOD_5	mg/l	199	63	34	23	
SOL. BOD_5	mg/l	59	57	29	20	
TOTAL COD	mg/l	367	69	66	69	
SOL. COD	mg/l	78	64	41	38	
TOTAL SS	mg/l	305	48	26	28	
VOL. SS	mg/l	141	27	18	19	
TOTAL NH_3 (as NH_3-N)	mg/l	15.3	1.8	3.2	4.3	
SOL. NH_3 (as NH_3-N)	mg/l	12.4	1.0	2.9	3.9	
TOTAL KN	mg/l	30.1	7.8	10.9	10.5	
SOL. KN	mg/l	17.6	4.5	7.1	7.8	
NO_2-N	mg/l			0.36		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	8.3		6.9	7.4	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			90,000	3,200	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: July 30, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.325			0.212	0.586
PEAK	MGD	0.900			0.300	0.775
TOTAL	MGD	0.763			0.258	0.684
TEMP.	^oC	28	30	30	30	
pH		7.1	7.7	7.8	7.2	
D.O.	mg/l	0.6	1.6	1.2	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	160	88	100	110	
TOTAL BOD_5	mg/l	148	46	38	21	
SOL.BOD_5	mg/l	53	30	24	16	
TOTAL COD	mg/l	314	75	72	47	
SOL.COD	mg/l	75	41	37	31	
TOTAL SS	mg/l	93	74	48	28	
VOL. SS	mg/l	58	40	21	19	
TOTAL NH_3 (as NH_3-N)	mg/l	15.5	1.8	4.8	5.3	
SOL. NH_3 (as NH_3-N)	mg/l	13.6	0.6	3.1	4.7	
TOTAL KN	mg/l	29.8	8.5	10.1	8.9	
SOL. KN	mg/l	18.5	3.7	7.2	6.9	
NO_2-N	mg/l			0.29		
NO_3-N	mg/l			0.19		
TOTAL-P	mg/l P	9.0		7.9	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			71,000	10,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 1, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.560			0.194	0.455
PEAK	MGD	0.923			0.255	0.776
TOTAL	MGD	0.862			0.226	0.672
TEMP.	^oC	28	29	29	28	
pH		7.1	7.2	7.2	7.2	
D.O.	mg/l	0.2	1.8	1.0	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	138	83	103	98	
TOTAL BOD_5	mg/l	140	45	40	43	
SOL.BOD_5	mg/l	49	28	26	20	
TOTAL COD	mg/l	154	64	45	80	
SOL.COD	mg/l	61	32	32	32	
TOTAL SS	mg/l	76	60	49	43	
VOL. SS	mg/l	47	37	33	26	
TOTAL NH_3 (as NH_3-N)	mg/l	18.8	1.7	4.0	4.0	
SOL. NH_3 (as NH_3-N)	mg/l	18.4	0.86	3.8	3.9	
TOTAL KN	mg/l	26.4	8.3	10.1	9.1	
SOL. KN	mg/l	22.2	5.8	7.3	7.3	
NO_2-N	mg/l			0.35		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	5.6		7.3	8.1	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			130,000	54,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 2, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.599			0.212	0.586
PEAK	MGD	1.053			0.300	0.911
TOTAL	MGD	0.953			0.263	0.816
TEMP.	°C	29	30	28	29	
pH		6.9	7.1	7.3	7.3	
D.O.	mg/l	0.4	1.2	2.2	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	118	82	99	96	
TOTAL BOD_5	mg/l	147	35	39	14	
SOL.BOD_5	mg/l	68	27	26	9	
TOTAL COD	mg/l	196	78	85	52	
SOL.COD	mg/l	82	46	36	36	
TOTAL SS	mg/l	121	60	38	26	
VOL. SS	mg/l	87	43	28	18	
TOTAL NH_3 (as NH_3-N)	mg/l	10.3	1.2	3.6	3.8	
SOL. NH_3 (as NH_3-N)	mg/l	10.0	0.71	3.2	3.4	
TOTAL KN	mg/l	18.9	7.8	9.7	9.8	
SOL. KN	mg/l	15.2	5.4	6.9	7.1	
NO_2-N	mg/l			0.33		
NO_3-N	mg/l			0.16		
TOTAL-P	mg/l P	7.6		7.9	8.1	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			69,000	18,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 3, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.493			0.160	0.703
PEAK	MGD	0.955			0.255	0.703
TOTAL	MGD	0.842			0.206	0.703
TEMP.	°C	28	29	28	28	
pH		7.0	7.0	7.1	7.1	
D.O.	mg/l	0.6	1.2	1.6	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	165	74	107	100	
TOTAL BOD_5	mg/l	164	51	42	22	
SOL.BOD_5	mg/l	69	32	28	17	
TOTAL COD	mg/l	185	62	58	55	
SOL.COD	mg/l	94	49	36	45	
TOTAL SS	mg/l	96	50	26	30	
VOL. SS	mg/l	38	35	18	20	
TOTAL NH_3 (as NH_3-N)	mg/l	23.7	1.1	3.5	5.1	
SOL. NH_3 (as NH_3-N)	mg/l	23.2	0.57	3.3	4.9	
TOTAL KN	mg/l	33.2	7.7	10.1	9.6	
SOL. KN	mg/l	31.4	4.1	6.9	7.3	
NO_2-N	mg/l			0.46		
NO_3-N	mg/l			0.22		
TOTAL-P	mg/l P	10.5		8.3	7.4	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			73,000	3,000	
ALGAE CELL CT.	#/ml		118,000	203,000	96,400	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 4, 1976 Wednesday

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.497			0.114	0.485
PEAK	MGD	0.962			0.274	0.831
TOTAL	MGD	0.846			0.253	0.712
TEMP.	^oC	28	29	29	27.5	
pH		7.3	7.4	7.2	7.1	
D.O.	mg/l	0.4	1.4	1.0	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	131	84	97	106	
TOTAL BOD_5	mg/l	128	64	48	23	
SOL.BOD_5	mg/l	51	28	26	13	
TOTAL COD	mg/l	173	99	98	83	
SOL.COD	mg/l	61	35	35	38	
TOTAL SS	mg/l	100	62	49	29	
VOL. SS	mg/l	66	40	33	18	
TOTAL NH_3 (as NH_3-N)	mg/l	17.5	1.4	3.9	5.3	
SOL. NH_3 (as NH_3-N)	mg/l	17.0	0.8	2.7	5.2	
TOTAL KN	mg/l	25.2	8.7	9.5	9.8	
SOL. KN	mg/l	23.9	2.9	6.2	9.1	
NO_2-N	mg/l			0.46		
NO_3-N	mg/l			0.34		
TOTAL-P	mg/l P	5.1		8.1	7.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			81,000	2.100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 5, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.490			0.151	0.348
PEAK	MGD	0.947			0.211	0.776
TOTAL	MGD	0.833			0.189	0.746
TEMP.	°C	28	30	30	28	
pH		7.0	7.2	7.1	7.2	
D.O.	mg/1	0.0	0.6	0.6	0.0	
ALKALINITY (as $CaCO_3$)	mg/1	146	87	102	110	
TOTAL BOD_5	mg/1	121	43	30	27	
SOL.BOD_5	mg/1	68	26	19	18	
TOTAL COD	mg/1	156	95	80	57	
SOL.COD	mg/1	78	38	41	41	
TOTAL SS	mg/1	89	73	77	26	
VOL. SS	mg/1	61	50	33	15	
TOTAL NH_3 (as NH_3-N)	mg/1	20.1	0.91	2.4	5.5	
SOL. NH_3 (as NH_3-N)	mg/1	19.8	0.24	1.9	5.0	
TOTAL KN	mg/1	29.4	8.1	9.2	9.0	
SOL. KN	mg/1	24.5	4.0	4.7	8.1	
NO_2-N	mg/1			0.41		
NO_3-N	mg/1			0.27		
TOTAL-P	mg/1 P	5.1		8.3	4.4	
CHLORINE RESIDUAL	mg/1				0.1	
FECAL COLIFORMS	#/100ml			190,000	5,600	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 6, 1976 Friday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.594			0.114	0.586
PEAK	MGD	1.044			0.194	0.911
TOTAL	MGD	0.906			0.178	0.809
TEMP.	°C	28	29	29	28	
pH		7.4	7.5	7.4	7.1	
D.O.	mg/l	0.0	0.4	0.6	0.1	
ALKALINITY (as $CaCO_3$)	mg/l	131	89	95	107	
TOTAL BOD_5	mg/l	183	63	61	27	
SOL.BOD_5	mg/l	68	42	28	20	
TOTAL COD	mg/l	287	86	86	67	
SOL.COD	mg/l	89	57	38	54	
TOTAL SS	mg/l	231	58	31	18	
VOL. SS	mg/l	103	54	23	10	
TOTAL NH_3 (as NH_3-N)	mg/l	15.1	1.7	3.1	4.6	
SOL. NH_3 (as NH_3-N)	mg/l	14.2	0.8	2.3	4.3	
TOTAL KN	mg/l	23.7	7.3	8.7	8.5	
SOL. KN	mg/l	16.5	3.9	5.5	7.2	
NO_2-N	mg/l			0.21		
NO_3-N	mg/l			0.12		
TOTAL-P	mg/l P	7.7		9.0	7.4	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			180,000	13,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: August 7, 1976 Saturday

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.708			0.151	0.485
PEAK	MGD	1.077			0.151	0.831
TOTAL	MGD	0.986			0.151	0.802
TEMP.	^{o}C	29	30	29	28	
pH		7.2	7.2	7.1	7.2	
D.O.	mg/1	0.6	0.6	0.4	0.4	
ALKALINITY (as $CaCO_3$)	mg/1	140	94	100	120	
TOTAL BOD_5	mg/1	174	88	56	22	
SOL.BOD_5	mg/1	106	68	40	17	
TOTAL COD	mg/1	255	121	70	67	
SOL.COD	mg/1	134	102	57	61	
TOTAL SS	mg/1	144	62	36	40	
VOL. SS	mg/1	89	37	27	19	
TOTAL NH_3 (as NH_3-N)	mg/1	12.1	1.6	3.2	5.5	
SOL. NH_3 (as NH_3-N)	mg/1	11.8	0.7	2.7	5.3	
TOTAL KN	mg/1	22.5	9.1	9.0	10.2	
SOL. KN	mg/1	16.1	6.0	6.2	8.4	
NO_2-N	mg/1			0.06		
NO_3-N	mg/1			0.08		
TOTAL-P	mg/1 P	13.9		8.3	7.9	
CHLORINE RESIDUAL	mg/1				0.1	
FECAL COLIFORMS	#/100ml			300,000	38,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 1, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.386			0.315	0.485
PEAK	MGD	0.619			0.354	0.831
TOTAL	MGD	0.564			0.268	0.487
TEMP.	°C	29	29	27	27	
pH		7.4	7.1	7.1	7.3	
D.O.	mg/1	0.4	2.2	1.0	1.6	
ALKALINITY (as $CaCO_3$)	mg/1	131	100	110	108	
TOTAL BOD_5	mg/1	180	85	54	33	
SOL. BOD_5	mg/1	120	43	38	20	
TOTAL COD	mg/1	288	118	74	62	
SOL. COD	mg/1	155	55	47	50	
TOTAL SS	mg/1	145	58	18	20	
VOL. SS	mg/1	73	21	14	10	
TOTAL NH_3 (as NH_3-N)	mg/1	14.1	2.8	4.9	4.8	
SOL. NH_3 (as NH_3-N)	mg/1	13.6	1.2	2.9	3.8	
TOTAL KN	mg/1	21.8	7.4	7.3	8.3	
SOL. KN	mg/1	17.4	6.0	6.5	7.3	
NO_2-N	mg/1			0.07		
NO_3-N	mg/1			0.06		
TOTAL-P	mg/1 P	6.4		7.9	6.9	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			100,000	14,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 2, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.331			0.315	0.703
PEAK	MGD	1.022			0.315	0.831
TOTAL	MGD	0.948			0.315	0.719
TEMP.	^{o}C	28	29	28	28	
pH		7.1	7.4	7.1	7.3	
D.O.	mg/l	0.0	1.8	0.4	1.4	
ALKALINITY (as $CaCO_3$)	mg/l	130	98	109	116	
TOTAL BOD_5	mg/l	138	53	40	24	
SOL.BOD_5	mg/l	62	41	29	14	
TOTAL COD	mg/l	250	113	51	48	
SOL.COD	mg/l	98	65	36	39	
TOTAL SS	mg/l	142	34	11	9	
VOL. SS	mg/l	98	28	6	6	
TOTAL NH_3 (as NH_3-N)	mg/l	12.8	2.0	3.5	4.1	
SOL. NH_3 (as NH_3-N)	mg/l	12.4	1.3	3.4	4.1	
TOTAL KN	mg/l	21.6	6.8	8.3	8.3	
SOL. KN	mg/l	15.7	5.7	6.9	7.5	
NO_2-N	mg/l			0.09		
NO_3-N	mg/l			0.08		
TOTAL-P	mg/l P	9.5		9.6	7.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			54,000	100	
ALGAE CELL CT.	#/ml		184,000	272,000	212,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 3, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.505			0.231	0.455
PEAK	MGD	0.699			0.255	0.587
TOTAL	MGD	0.699			0.243	0.481
TEMP.	°C	29	29	28	27	
pH		7.5	7.6	7.4	7.4	
D.O.	mg/l	0.3	3.2	1.2	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	140	110	120	92	
TOTAL BOD_5	mg/l	176	64	44	23	
SOL.BOD_5	mg/l	74	40	33	11	
TOTAL COD	mg/l	230	106	56	77	
SOL.COD	mg/l	97	53	41	44	
TOTAL SS	mg/l	179	13	20	37	
VOL. SS	mg/l	153	11	17	26	
TOTAL NH_3 (as NH_3-N)	mg/l	14.2	3.8	4.1	0.92	
SOL. NH_3 (as NH_3-N)	mg/l	13.8	3.6	4.0	0.76	
TOTAL KN	mg/l	22.0	9.5	8.4	7.3	
SOL. KN	mg/l	16.5	7.4	7.1	4.5	
NO_2-N	mg/l			0.09		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	9.3		8.3	9.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			72,000	100	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 4, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.248			0.231	0.455
PEAK	MGD	0.800			0.274	0.831
TOTAL	MGD	0.714			0.251	0.612
TEMP.	°C	28	28	26	26	
pH		7.1	7.1	6.9	7.1	
D.O.	mg/l	0.2	3.8	1.1	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	124	90	107	115	
TOTAL BOD_5	mg/l	138	51	35	17	
SOL.BOD_5	mg/l	62	33	26	10	
TOTAL COD	mg/l	172	65	46	55	
SOL.COD	mg/l	74	45	37	25	
TOTAL SS	mg/l	106	33	20	12	
VOL. SS	mg/l	72	27	11	9	
TOTAL NH_3 (as NH_3-N)	mg/l	13.8	1.1	3.6	4.5	
SOL. NH_3 (as NH_3-N)	mg/l	13.0	0.66	3.3	4.3	
TOTAL KN	mg/l	20.5	7.5	8.1	7.6	
SOL. KN	mg/l	15.2	5.2	6.9	6.9	
NO_2-N	mg/l			0.16		
NO_3-N	mg/l			0.23		
TOTAL-P	mg/l P	8.1		8.3	9.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			200,000	12,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 5, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.516			0.255	0.197
PEAK	MGD	0.743			0.315	0.703
TOTAL	MGD	0.619			0.251	0.526
TEMP.	^{o}C	27	26	26	25	
pH		6.9	7.3	7.3	7.1	
D.O.	mg/l	0.4	2.6	1.2	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	138	94	112	101	
TOTAL BOD_5	mg/l	183	51	45	19	
SOL. BOD_5	mg/l	65	37	26	11	
TOTAL COD	mg/l	249	80	58	46	
SOL. COD	mg/l	80	43	34	34	
TOTAL SS	mg/l	165	35	18	16	
VOL. SS	mg/l	106	22	12	7	
TOTAL NH_3 (as NH_3-N)	mg/l	17.2	2.0	4.6	3.6	
SOL. NH_3 (as NH_3-N)	mg/l	16.8	1.8	3.8	3.4	
TOTAL KN	mg/l	26.3	7.5	8.2	8.8	
SOL. KN	mg/l	19.6	5.4	7.3	8.0	
NO_2-N	mg/l			0.28		
NO_3-N	mg/l			0.10		
TOTAL-P	mg/l P	7.0		7.6	6.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			370,000	80	
ALGAE CELL CT.	#/ml		160,000	306,000	210,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 6, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.344			0.231	0.485
PEAK	MGD	0.853			0.255	0.643
TOTAL	MGD	0.693			0.253	0.604
TEMP.	°C	26	28	27	27	
pH		7.3	7.2	7.2	7.1	
D.O.	mg/l	0.3	3.0	1.1	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	160	110	106	105	
TOTAL BOD_5	mg/l	212	60	44	23	
SOL.BOD_5	mg/l	81	33	24	17	
TOTAL COD	mg/l	290	71	53	49	
SOL.COD	mg/l	96	46	34	43	
TOTAL SS	mg/l	139	29	18	17	
VOL. SS	mg/l	85	18	10	10	
TOTAL NH_3 (as NH_3-N)	mg/l	15.7	3.0	4.5	4.8	
SOL. NH_3 (as NH_3-N)	mg/l	13.9	2.8	3.7	4.6	
TOTAL KN	mg/l	20.2	8.5	8.0	8.6	
SOL. KN	mg/l	19.2	6.2	4.8	7.4	
NO_2-N	mg/l			0.27		
NO_3-N	mg/l			0.10		
TOTAL-P	mg/l P	11.9		9.0	8.1	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			164,000	1,700	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 7, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.478			0.212	0.392
PEAK	MGD	0.787			0.274	0.643
TOTAL	MGD	0.729			0.241	0.597
TEMP.	°C	27	27	26	25	
pH		7.1	7.4	7.3	7.4	
D.O.	mg/l	0.4	3.6	1.2	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	136	108	105	103	
TOTAL BOD_5	mg/l	156	52	37	20	
SOL.BOD_5	mg/l	78	34	29	14	
TOTAL COD	mg/l	204	68	74	43	
SOL.COD	mg/l	91	46	43	40	
TOTAL SS	mg/l	99	26	18	17	
VOL. SS	mg/l	57	9	8	5	
TOTAL NH_3 (as NH_3-N)	mg/l	18.2	4.3	3.9	4.7	
SOL. NH_3 (as NH_3-N)	mg/l	18.0	4.1	3.6	4.0	
TOTAL KN	mg/l	27.4	8.7	8.1	7.5	
SOL. KN	mg/l	25.5	7.6	6.9	7.2	
NO_2-N	mg/l			0.15		
NO_3-N	mg/l			0.10		
TOTAL-P	mg/l P	6.4		9.5	7.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			100,000	10,000	
ALGAE CELL CT.	#/ml		270,000	408,000	245,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 8, 1976 Wednesday

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.582			0.274	0.586
PEAK	MGD	0.873			0.274	0.703
TOTAL	MGD	0.778			0.274	0.688
TEMP.	°C	28	28	26	25	
pH		7.4	7.3	7.3	7.5	
D.O.	mg/l	0.5	2.4	0.4	0.7	
ALKALINITY (as $CaCO_3$)	mg/l	117	112	107	104	
TOTAL BOD_5	mg/l	157	47	37	21	
SOL.BOD_5	mg/l	82	39	29	13	
TOTAL COD	mg/l	191	82	48	44	
SOL.COD	mg/l	103	51	33	36	
TOTAL SS	mg/l	118	60	19	15	
VOL. SS	mg/l	66	36	13	11	
TOTAL NH_3 (as NH_3-N)	mg/l	10.9	5.7	4.1	4.8	
SOL. NH_3 (as NH_3-N)	mg/l	10.4	4.5	4.1	4.6	
TOTAL KN	mg/l	17.8	9.9	7.7	8.2	
SOL. KN	mg/l	13.9	8.4	6.9	7.1	
NO_2-N	mg/l			0.20		
NO_3-N	mg/l			0.09		
TOTAL-P	mg/l P	9.3		11.1	7.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			630,000	1,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 9, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.754			0.274	0.455
PEAK	MGD	0.962			0.315	0.776
TOTAL	MGD	0.962			0.293	0.686
TEMP.	°C	28	27	26	26	
pH		7.2	7.4	7.1	7.3	
D.O.	mg/l	0.3	2.8	0.6	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	133	114	107	105	
TOTAL BOD_5	mg/l	156	63	38	27	
SOL. BOD_5	mg/l	71	40	29	13	
TOTAL COD	mg/l	186	74	52	52	
SOL. COD	mg/l	85	49	40	46	
TOTAL SS	mg/l	153	18	9	10	
VOL. SS	mg/l	88	14	7	9	
TOTAL NH_3 (as NH_3-N)	mg/l	12.4	6.2	4.1	4.4	
SOL. NH_3 (as NH_3-N)	mg/l	12.2	5.8	3.8	4.2	
TOTAL KN	mg/l	21.7	10.5	8.6	7.3	
SOL. KN	mg/l	15.7	9.6	7.2	7.1	
NO_2-N	mg/l			0.10		
NO_3-N	mg/l			0.15		
TOTAL-P	mg/l P	10.6		8.6	7.1	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			460,000	200	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 10, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.279			0.160	0.348
PEAK	MGD	0.875			0.255	0.776
TOTAL	MGD	0.671			0.207	0.591
TEMP.	°C	27	26	26	25	
pH		7.2	7.4	7.1	7.2	
D.O.	mg/l	0.2	3.4	0.8	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	126	120	116	110	
TOTAL BOD_5	mg/l	223	66	38	21	
SOL.BOD_5	mg/l	89	55	25	17	
TOTAL COD	mg/l	382	90	73	55	
SOL.COD	mg/l	110	72	58	46	
TOTAL SS	mg/l	129	24	13	11	
VOL. SS	mg/l	87	17	9	7	
TOTAL NH_3 (as NH_3-N)	mg/l	11.3	7.1	4.7	4.6	
SOL. NH_3 (as NH_3-N)	mg/l	10.2	6.6	4.3	4.1	
TOTAL KN	mg/l	22.0	12.3	8.5	8.1	
SOL. KN	mg/l	15.7	10.3	7.6	7.5	
NO_2-N	mg/l			0.13		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	10.2		6.9	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			350,000	3,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 11, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.282			0.114	0.286
PEAK	MGD	0.675			0.211	0.703
TOTAL	MGD	0.583			0.163	0.496
TEMP.	°C	29	27	26	26	
pH		7.3	7.2	7.2	7.1	
D.O.	mg/l	0.6	2.9	0.6	1.4	
ALKALINITY (as $CaCO_3$)	mg/l	139	120	112	108	
TOTAL BOD_5	mg/l	160	40	52	34	
SOL.BOD_5	mg/l	74	24	19	16	
TOTAL COD	mg/l	221	63	60	57	
SOL.COD	mg/l	86	38	29	38	
TOTAL SS	mg/l	218	44	25	14	
VOL. SS	mg/l	211	24	7	6	
TOTAL NH_3 (as NH_3-N)	mg/l	14.6	7.2	4.8	5.1	
SOL. NH_3 (as NH_3-N)	mg/l	14.4	6.7	4.6	4.6	
TOTAL KN	mg/l	24.3	12.1	9.9	8.2	
SOL. KN	mg/l	17.1	9.3	7.3	7.6	
NO_2-N	mg/l			0.04		
NO_3-N	mg/l			0.09		
TOTAL-P	mg/l P	7.9		8.6	7.6	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			315,000	34,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 12, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.207			0.129	0.348
PEAK	MGD	0.689			0.194	0.643
TOTAL	MGD	0.519			0.153	0.462
TEMP.	^{o}C	27	25	25	25	
pH		7.1	7.4	6.7	7.0	
D.O.	mg/l	0.0	1.4	0.4	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	149	124	117	107	
TOTAL BOD_5	mg/l	156	48	50	30	
SOL.BOD_5	mg/l	72	30	28	25	
TOTAL COD	mg/l	244	63	54	47	
SOL.COD	mg/l	85	41	38	32	
TOTAL SS	mg/l	240	35	42	26	
VOL. SS	mg/l	156	30	19	15	
TOTAL NH_3 (as NH_3-N)	mg/l	14.4	7.0	5.7	5.1	
SOL. NH_3 (as NH_3-N)	mg/l	13.4	6.8	4.8	4.6	
TOTAL KN	mg/l	24.6	12.5	9.0	7.8	
SOL. KN	mg/l	17.0	9.9	7.6	6.5	
NO_2-N	mg/l			0.02		
NO_3-N	mg/l			0.10		
TOTAL-P	mg/l P	9.5		8.1	10.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			300,000	6,800	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 13, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.387			0.212	0.393
PEAK	MGD	0.965			0.328	0.831
TOTAL	MGD	0.864			0.268	0.734
TEMP.	^oC	27	27	26	25	
pH		7.2	7.1	6.9	7.2	
D.O.	mg/1	0.0	3.4	0.6	1.2	
ALKALINITY (as $CaCO_3$)	mg/1	155	126	121	108	
TOTAL BOD_5	mg/1	170	55	45	28	
SOL.BOD_5	mg/1	76	44	30	20	
TOTAL COD	mg/1	259	73	70	47	
SOL.COD	mg/1	98	57	54	41	
TOTAL SS	mg/1	130	26	12	13	
VOL. SS	mg/1	106	17	9	9	
TOTAL NH_3 (as NH_3-N)	mg/1	14.6	7.4	6.5	4.8	
SOL. NH_3 (as NH_3-N)	mg/1	14.0	6.9	5.5	4.8	
TOTAL KN	mg/1	23.6	12.8	11.6	10.2	
SOL. KN	mg/1	18.9	11.3	10.6	9.7	
NO_2-N	mg/1			0.05		
NO_3-N	mg/1			0.10		
TOTAL-P	mg/1 P	11.0		8.6	7.1	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			675,000	54,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 14, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.328			0.194	0.393
PEAK	MGD	0.801			0.274	0.703
TOTAL	MGD	0.627			0.241	0.564
TEMP.	°C	27	27	25	25	
pH		7.3	7.4	6.9	7.2	
D.O.	mg/1	0.6	3.5	0.8	1.2	
ALKALINITY (as $CaCO_3$)	mg/1	138	129	125	114	
TOTAL BOD_5	mg/1	165	54	58	28	
SOL.BOD_5	mg/1	78	29	25	22	
TOTAL COD	mg/1	204	80	64	54	
SOL.COD	mg/1	94	38	48	48	
TOTAL SS	mg/1	112	39	29	24	
VOL. SS	mg/1	74	14	6	6	
TOTAL NH_3 (as NH_3-N)	mg/1	12.9	7.8	5.7	4.8	
SOL. NH_3 (as NH_3-N)	mg/1	11.6	7.3	5.7	4.4	
TOTAL KN	mg/1	22.5	13.3	10.4	8.3	
SOL. KN	mg/1	16.8	11.2	9.9	8.1	
NO_2-N	mg/1			0.06		
NO_3-N	mg/1			0.13		
TOTAL-P	mg/1 P	8.1		9.5	8.2	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			540,000	70,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 15, 1976 Wednesday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.418			0.194	0.587
PEAK	MGD	0.920			0.231	0.776
TOTAL	MGD	0.768			0.212	0.683
TEMP.	°C	28	26	25	24	
pH		7.3	7.4	7.0	7.2	
D.O.	mg/l	0.4	2.8	0.5	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	158	132	123	114	
TOTAL BOD_5	mg/l	161	53	47	28	
SOL.BOD_5	mg/l	85	38	35	21	
TOTAL COD	mg/l	243	66	63	51	
SOL.COD	mg/l	96	45	41	32	
TOTAL SS	mg/l	158	28	12	17	
VOL. SS	mg/l	141	22	5	10	
TOTAL NH_3 (as NH_3-N)	mg/l	14.1	8.9	6.6	5.2	
SOL. NH_3 (as NH_3-N)	mg/l	11.6	7.4	5.3	4.1	
TOTAL KN	mg/l	23.2	15.1	10.5	9.3	
SOL. KN	mg/l	17.0	11.6	9.1	8.1	
NO_2-N	mg/l			0.07		
NO_3-N	mg/l			0.21		
TOTAL-P	mg/l P	10.0		9.6	7.9	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			650,000	21,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 16, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.525			0.160	0.485
PEAK	MGD	0.959			0.274	0.831
TOTAL	MGD	0.821			0.193	0.714
TEMP.	^oC	27	26	25	24	
pH		7.2	7.4	6.8	6.9	
D.O.	mg/l	0.0	2.2	0.6	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	156	142	132	126	
TOTAL BOD_5	mg/l	192	72	40	29	
SOL.BOD_5	mg/l	67	32	27	20	
TOTAL COD	mg/l	307	91	56	63	
SOL.COD	mg/l	88	47	41	50	
TOTAL SS	mg/l	124	42	20	15	
VOL. SS	mg/l	99	34	12	8	
TOTAL NH_3 (as NH_3-N)	mg/l	13.8	8.9	6.6	6.1	
SOL. NH_3 (as NH_3-N)	mg/l	13.0	7.9	5.8	5.5	
TOTAL KN	mg/l	25.2	15.5	11.8	10.4	
SOL. KN	mg/l	15.5	13.0	10.9	9.9	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.13		
TOTAL-P	mg/l P	9.8		8.8	8.1	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			210,000	180,000	
ALGAE CELL CT.	#/ml		201,000	58,500	32,600	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 17, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.348			0.151	0.348
PEAK	MGD	0.887			0.255	0.776
TOTAL	MGD	0.756			0.226	0.667
TEMP.	°C	28	27	25	25	
pH		7.2	7.4	7.0	6.9	
D.O.	mg/1	0.4	4.0	2.0	0.6	
ALKALINITY (as $CaCO_3$)	mg/1	146	140	135	136	
TOTAL BOD_5	mg/1	134	60	34	36	
SOL.BOD_5	mg/1	67	35	30	20	
TOTAL COD	mg/1	206	70	73	64	
SOL.COD	mg/1	70	38	38	51	
TOTAL SS	mg/1	94	44	20	20	
VOL. SS	mg/1	73	32	11	18	
TOTAL NH_3 (as NH_3-N)	mg/1	11.8	8.8	6.2	6.7	
SOL. NH_3 (as NH_3-N)	mg/1	11.4	8.5	5.9	6.7	
TOTAL KN	mg/1	21.5	15.2	10.9	11.1	
SOL. KN	mg/1	15.3	12.5	7.6	9.7	
NO_2-N	mg/1			0.02		
NO_3-N	mg/1			0.12		
TOTAL-P	mg/1 P	9.0		11.3	9.0	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			81,000	63,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 18, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.467			0.274	0.255
PEAK	MGD	0.758			0.300	0.703
TOTAL	MGD	0.592			0.296	0.614
TEMP.	°C	28	27	26	25	
pH		7.3	7.3	7.7	7.0	
D.O.	mg/l	0.4	3.0	2.0	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	151	144	142	117	
TOTAL BOD_5	mg/l	170	69	71	27	
SOL.BOD_5	mg/l	36	28	20	19	
TOTAL COD	mg/l	212	82	79	38	
SOL.COD	mg/l	47	38	22	32	
TOTAL SS	mg/l	98	24	20	17	
VOL. SS	mg/l	56	17	14	13	
TOTAL NH_3 (as NH_3-N)	mg/l	12.8	8.9	8.2	5.3	
SOL. NH_3 (as NH_3-N)	mg/l	12.5	8.3	7.8	5.1	
TOTAL KN	mg/l	20.7	15.3	14.3	10.1	
SOL. KN	mg/l	15.5	12.2	11.3	8.3	
NO_2-N	mg/l			0.02		
NO_3-N	mg/l			0.15		
TOTAL-P	mg/l P	10.0		11.1	11.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			500,000	200,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 19, 1976 Sunday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.492			0.194	0.348
PEAK	MGD	0.870			0.315	0.831
TOTAL	MGD	0.774			0.261	0.685
TEMP.	°C	27	27	25	25	
pH		7.3	7.5	7.2	7.3	
D.O.	mg/l	0.6	3.0	0.8	1.4	
ALKALINITY (as $CaCO_3$)	mg/l	171	144	140	128	
TOTAL BOD_5	mg/l	193	54	44	30	
SOL. BOD_5	mg/l	84	41	26	14	
TOTAL COD	mg/l	233	81	78	68	
SOL. COD	mg/l	90	53	59	50	
TOTAL SS	mg/l	278	52	41	32	
VOL. SS	mg/l	227	38	29	21	
TOTAL NH_3 (as NH_3-N)	mg/l	16.1	9.2	8.3	6.1	
SOL. NH_3 (as NH_3-N)	mg/l	15.6	8.5	7.8	5.8	
TOTAL KN	mg/l	27.9	17.2	13.9	11.4	
SOL. KN	mg/l	20.5	11.6	11.4	9.6	
NO_2-N	mg/l			0.22		
NO_3-N	mg/l			0.15		
TOTAL-P	mg/l P	9.7		10.0	10.0	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			130,000	2,000	
ALGAE CELL CT.	#/ml		252,000	145,000	81,500	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 20, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.365			0.160	0.455
PEAK	MGD	0.785			0.231	0.643
TOTAL	MGD	0.678			0.196	0.587
TEMP.	°C	28	27	25	25	
pH		7.3	7.4	7.1	7.2	
D.O.	mg/l	0.4	3.0	0.6	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	165	144	139	138	
TOTAL BOD_5	mg/l	190	66	43	26	
SOL.BOD_5	mg/l	78	40	31	15	
TOTAL COD	mg/l	263	97	88	72	
SOL.COD	mg/l	91	47	72	50	
TOTAL SS	mg/l	180	44	27	27	
VOL. SS	mg/l	135	41	16	23	
TOTAL NH_3 (as NH_3-N)	mg/l	15.6	9.9	8.1	8.0	
SOL. NH_3 (as NH_3-N)	mg/l	13.8	9.2	6.9	6.8	
TOTAL KN	mg/l	25.8	17.0	11.4	11.9	
SOL. KN	mg/l	18.3	13.4	10.2	10.4	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.13		
TOTAL-P	mg/l P	11.6		8.8	8.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			130,000	58,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 21, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.480			0.212	0.393
PEAK	MGD	0.835			0.255	0.775
TOTAL	MGD	0.742			0.248	0.657
TEMP.	°C	28	26	25	24	
pH		7.3	7.5	7.0	7.3	
D.O.	mg/l	0.2	2.8	1.0	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	152	144	136	125	
TOTAL BOD_5	mg/l	157	58	44	27	
SOL.BOD_5	mg/l	63	39	25	18	
TOTAL COD	mg/l	191	75	69	56	
SOL.COD	mg/l	82	54	47	41	
TOTAL SS	mg/l	130	35	22	20	
VOL. SS	mg/l	107	29	14	15	
TOTAL NH_3 (as NH_3-N)	mg/l	13.4	9.6	7.4	7.0	
SOL. NH_3 (as NH_3-N)	mg/l	13.1	9.1	7.2	6.8	
TOTAL KN	mg/l	24.1	16.4	12.2	11.8	
SOL. KN	mg/l	19.2	12.9	11.9	10.1	
NO_2-N	mg/l			0.04		
NO_3-N	mg/l			0.16		
TOTAL-P	mg/l P	9.6		9.3	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			103,000	45,000	
ALGAE CELL CT.	#/ml		227,000	126,000	76,500	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 22, 1976 Wednesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.551			0.231	0.486
PEAK	MGD	0.906			0.354	0.831
TOTAL	MGD	0.834			0.289	0.729
TEMP.	^{o}C	28	26	25	24	
pH		7.2	7.3	6.8	6.7	
D.O.	mg/l	0.4	3.4	0.5	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	165	145	142	134	
TOTAL BOD_5	mg/l	194	77	48	30	
SOL.BOD_5	mg/l	82	42	42	21	
TOTAL COD	mg/l	275	85	61	52	
SOL.COD	mg/l	97	55	55	42	
TOTAL SS	mg/l	121	50	16	26	
VOL. SS	mg/l	88	36	12	13	
TOTAL NH_3 (as NH_3-N)	mg/l	17.0	6.4	8.9	8.2	
SOL. NH_3 (as NH_3-N)	mg/l	10.5	5.2	6.2	5.7	
TOTAL KN	mg/l	26.0	16.8	13.6	11.9	
SOL. KN	mg/l	20.0	12.8	11.1	10.4	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.16		
TOTAL-P	mg/l P	10.9		8.3	9.9	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			68,000	30,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 23, 1976 Thursday

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.262			0.194	0.393
PEAK	MGD	0.979			0.315	0.831
TOTAL	MGD	0.758			0.265	0.652
TEMP.	°C	28	26	25	25	
pH		7.2	7.4	6.8	7.0	
D.O.	mg/l	0.4	2.6	0.6	0.4	
ALKALINITY (as $CaCO_3$)	mg/l	135	140	155	143	
TOTAL BOD_5	mg/l	168	56	40	35	
SOL. BOD_5	mg/l	71	39	32	16	
TOTAL COD	mg/l	184	67	74	55	
SOL. COD	mg/l	83	52	46	21	
TOTAL SS	mg/l	149	38	15	28	
VOL. SS	mg/l	101	29	12	14	
TOTAL NH_3 (as NH_3-N)	mg/l	12.2	10.4	9.6	8.8	
SOL. NH_3 (as NH_3-N)	mg/l	10.4	8.8	8.2	7.8	
TOTAL KN	mg/l	21.6	16.6	13.7	12.4	
SOL. KN	mg/l	15.1	13.2	12.9	11.8	
NO_2-N	mg/l			0.06		
NO_3-N	mg/l			0.18		
TOTAL-P	mg/l P	10.4		9.3	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			300,000	105,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 24, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.370			0.160	0.455
PEAK	MGD	0.856			0.300	0.776
TOTAL	MGD	0.729			0.254	0.637
TEMP.	^oC	27	27	25	25	
pH		7.1	7.7	7.3	7.2	
D.O.	mg/l	0.2	3.8	0.8	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	143	135	141	140	
TOTAL BOD_5	mg/l	182	70	65	55	
SOL.BOD_5	mg/l	80	48	44	30	
TOTAL COD	mg/l	197	77	68	65	
SOL.COD	mg/l	86	54	52	46	
TOTAL SS	mg/l	81	50	14	20	
VOL. SS	mg/l	63	40	11	12	
TOTAL NH_3 (as NH_3-N)	mg/l	11.6	8.4	6.9	8.0	
SOL. NH_3 (as NH_3-N)	mg/l	10.8	7.9	6.6	7.7	
TOTAL KN	mg/l	21.9	18.4	12.7	12.0	
SOL. KN	mg/l	15.6	12.8	11.2	11.6	
NO_2-N	mg/l			0.07		
NO_3-N	mg/l			0.12		
TOTAL-P	mg/l P	8.1		9.5	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			210,000	32,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 25, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.404			0.211	0.348
PEAK	MGD	0.877			0.329	0.831
TOTAL	MGD	0.753			0.273	0.663
TEMP.	^oC	28	28	29	28	
pH		7.0	6.9	7.4	7.2	
D.O.	mg/1	1.2	0.7	3.5	0.8	
ALKALINITY (as $CaCO_3$)	mg/1	144	148	132	158	
TOTAL BOD_5	mg/1	200	80	65	26	
SOL.BOD_5	mg/1	78	51	48	23	
TOTAL COD	mg/1	228	86	68	68	
SOL.COD	mg/1	83	63	55	49	
TOTAL SS	mg/1	140	48	13	18	
VOL. SS	mg/1	112	40	10	16	
TOTAL NH_3 (as NH_3-N)	mg/1	11.6	7.1	4.8	4.3	
SOL. NH_3 (as NH_3-N)	mg/1	8.1	6.7	4.6	4.2	
TOTAL KN	mg/1	22.2	15.0	12.7	13.2	
SOL. KN	mg/1	16.7	11.5	11.5	12.2	
NO_2-N	mg/1			0.07		
NO_3-N	mg/1			0.12		
TOTAL-P	mg/1 P	10.5		10.5	9.5	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			180,000	43,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 26, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.346			0.151	0.393
PEAK	MGD	0.796			0.255	0.703
TOTAL	MGD	0.687			0.216	0.628
TEMP.	°C	27	27	25	25	
pH		7.1	7.4	6.8	6.8	
D.O.	mg/l	0.2	1.4	0.4	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	167	127	143	137	
TOTAL BOD_5	mg/l	162	77	46	34	
SOL.BOD_5	mg/l	74	36	33	15	
TOTAL COD	mg/l	202	98	64	58	
SOL.COD	mg/l	89	47	43	40	
TOTAL SS	mg/l	180	100	50	22	
VOL. SS	mg/l	114	78	28	12	
TOTAL NH_3 (as NH_3-N)	mg/l	16.9	6.5	9.0	10.6	
SOL. NH_3 (as NH_3-N)	mg/l	16.3	6.3	7.5	9.4	
TOTAL KN	mg/l	26.4	14.1	14.3	14.1	
SOL. KN	mg/l	22.2	11.8	12.9	12.3	
NO_2-N	mg/l			0.08		
NO_3-N	mg/l			0.10		
TOTAL-P	mg/l P	12.9		9.8	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			150,000	68,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 27, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.379			0.211	0.348
PEAK	MGD	0.826			0.274	0.831
TOTAL	MGD	0.720			0.246	0.649
TEMP.	°C	28	27	25	25	
pH		7.1	7.1	6.6	6.8	
D.O.	mg/l	0.2	2.2	0.8	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	195	127	148	140	
TOTAL BOD_5	mg/l	102	68	59	55	
SOL.BOD_5	mg/l	36	29	26	22	
TOTAL COD	mg/l	124	72	72	69	
SOL.COD	mg/l	48	33	42	57	
TOTAL SS	mg/l	183	53	25	8	
VOL. SS	mg/l	117	36	15	6	
TOTAL NH_3 (as NH_3-N)	mg/l	28.0	5.7	9.3	9.0	
SOL. NH_3 (as NH_3-N)	mg/l	27.2	5.4	8.9	8.6	
TOTAL KN	mg/l	42.8	12.9	12.9	14.6	
SOL. KN	mg/l	34.7	10.1	12.5	12.5	
NO_2-N	mg/l			0.04		
NO_3-N	mg/l			0.06		
TOTAL-P	mg/l P	8.1		8.8	8.7	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			60,000	53,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 28, 1978 Tuesday

PARAMETER	UNITS	L1	L2	L3	L4	F4
		SAMPLING POINT				
FLOW*						
MIN	MGD	0.371			0.114	0.256
PEAK	MGD	0.809			0.300	0.776
TOTAL	MGD	0.707			0.228	0.623
TEMP.	°C	26	26	25	25	
pH		7.1	7.2	6.9	6.5	
D.O.	mg/1	0.8	2.4	0.8	1.2	
ALKALINITY (as $CaCO_3$)	mg/1	142	119	154	142	
TOTAL BOD_5	mg/1	162	68	64	45	
SOL.BOD_5	mg/1	84	41	40	26	
TOTAL COD	mg/1	198	84	84	78	
SOL.COD	mg/1	96	51	69	54	
TOTAL SS	mg/1	140	66	27	23	
VOL. SS	mg/1	107	51	24	17	
TOTAL NH_3 (as NH_3-N)	mg/1	11.2	5.1	8.9	9.9	
SOL. NH_3 (as NH_3-N)	mg/1	10.7	5.1	8.7	9.2	
TOTAL KN	mg/1	19.6	12.2	14.6	14.0	
SOL. KN	mg/1	14.1	8.7	11.9	12.0	
NO_2-N	mg/1			0.06		
NO_3-N	mg/1			0.02		
TOTAL-P	mg/1 P	8.3		8.8	8.8	
CHLORINE RESIDUAL	mg/1				0.1	
FECAL COLIFORMS	#/100ml			106,000	100,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 29, 1976 Wednesday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.310			0.194	0.286
PEAK	MGD	0.828			0.274	0.643
TOTAL	MGD	0.662			0.232	0.579
TEMP.	°C	28	26	25	25	
pH		7.2	7.5	7.1	7.2	
D.O.	mg/l	0.3	2.0	0.6	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	150	126	147	155	
TOTAL BOD_5	mg/l	200	69	47	33	
SOL. BOD_5	mg/l	83	34	32	15	
TOTAL COD	mg/l	282	83	55	64	
SOL. COD	mg/l	95	46	49	55	
TOTAL SS	mg/l	140	53	20	17	
VOL. SS	mg/l	82	34	16	9	
TOTAL NH_3 (as NH_3-N)	mg/l	11.4	3.9	8.4	9.1	
SOL. NH_3 (as NH_3-N)	mg/l	11.0	3.6	7.8	8.6	
TOTAL KN	mg/l	21.6	11.8	14.0	13.9	
SOL. KN	mg/l	15.9	7.5	11.9	12.8	
NO_2-N	mg/l			0.21		
NO_3-N	mg/l			0.13		
TOTAL-P	mg/l P	10.0		8.3	8.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			109,000	44,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: September 30, 1976 Thursday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.448			0.151	0.348
PEAK	MGD	0.763			0.315	0.703
TOTAL	MGD	0.734			0.249	0.661
TEMP.	^oC	27	24	24	25	
pH		7.2	7.4	7.1	7.2	
D.O.	mg/l	0.5	2.2	0.8	1.3	
ALKALINITY (as $CaCO_3$)	mg/l	142	118	149	156	
TOTAL BOD_5	mg/l	168	78	54	36	
SOL.BOD_5	mg/l	69	37	31	21	
TOTAL COD	mg/l	191	109	70	70	
SOL.COD	mg/l	82	48	55	64	
TOTAL SS	mg/l	115	68	29	21	
VOL. SS	mg/l	72	42	14	8	
TOTAL NH_3 (as NH_3-N)	mg/l	11.3	2.0	8.6	10.0	
SOL. NH_3 (as NH_3-N)	mg/l	10.4	1.7	8.4	9.6	
TOTAL KN	mg/l	19.8	10.6	14.1	14.1	
SOL. KN	mg/l	15.7	5.8	12.3	13.1	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.11		
TOTAL-P	mg/l P	9.6		8.5	8.2	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			163,000	40,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 1, 1976 Friday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.594			0.114	0.348
PEAK	MGD	0.795			0.274	0.703
TOTAL	MGD	0.784			0.232	0.687
TEMP.	°C	25	26	26	25	
pH		7.3	7.2	6.9	6.4	
D.O.	mg/l	0.5	2.2	0.8	1.1	
ALKALINITY (as $CaCO_3$)	mg/l	150	95	146	137	
TOTAL BOD_5	mg/l	166	73	52	31	
SOL.BOD_5	mg/l	63	29	26	22	
TOTAL COD	mg/l	202	84	75	63	
SOL.COD	mg/l	75	39	42	48	
TOTAL SS	mg/l	94	55	17	13	
VOL. SS	mg/l	83	38	10	7	
TOTAL NH_3 (as NH_3-N)	mg/l	13.8	0.0	7.8	11.1	
SOL. NH_3 (as NH_3-N)	mg/l	12.8	0.0	7.2	9.5	
TOTAL KN	mg/l	20.6	7.6	13.1	13.2	
SOL. KN	mg/l	18.4	3.7	11.0	12.9	
NO_2-N	mg/l			0.24		
NO_3-N	mg/l			0.27		
TOTAL-P	mg/l P	10.4		8.3	8.3	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			189,000	20,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 2, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.443			0.160	0.393
PEAK	MGD	0.679			0.255	0.586
TOTAL	MGD	0.639			0.214	0.554
TEMP.	°C	25	24	23	23	
pH		7.1	7.2	6.6	6.6	
D.O.	mg/l	0.2	1.8	0.8	0.9	
ALKALINITY (as $CaCO_3$)	mg/l	131	103	142	133	
TOTAL BOD_5	mg/l	207	87	68	32	
SOL.BOD_5	mg/l	78	35	32	21	
TOTAL COD	mg/l	314	107	81	58	
SOL.COD	mg/l	87	52	42	55	
TOTAL SS	mg/l	150	81	88	17	
VOL. SS	mg/l	109	53	80	4	
TOTAL NH_3 (as NH_3-N)	mg/l	13.4	0.0	7.0	9.2	
SOL. NH_3 (as NH_3-N)	mg/l	12.4	0.0	6.1	8.6	
TOTAL KN	mg/l	24.4	8.1	13.1	13.8	
SOL. KN	mg/l	19.3	3.9	10.6	12.8	
NO_2-N	mg/l			0.15		
NO_3-N	mg/l			0.27		
TOTAL-P	mg/l P	9.3		9.7	8.8	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			180,000	30,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 3, 1976 Sunday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.410			0.129	0.286
PEAK	MGD	0.616			0.300	0.643
TOTAL	MGD	0.595			0.249	0.532
TEMP.	°C	27	25	23	22	
pH		7.3	7.6	7.0	6.9	
D.O.	mg/l	0.2	2.4	1.4	1.2	
ALKALINITY (as $CaCO_3$)	mg/l	176	104	154	142	
TOTAL BOD_5	mg/l	152	69	50	35	
SOL.BOD_5	mg/l	67	33	28	20	
TOTAL COD	mg/l	204	91	62	58	
SOL.COD	mg/l	78	45	36	42	
TOTAL SS	mg/l	117	83	28	20	
VOL. SS	mg/l	94	60	20	5	
TOTAL NH_3 (as NH_3-N)	mg/l	22.0	0.18	9.4	10.0	
SOL. NH_3 (as NH_3-N)	mg/l	20.0	0.0	8.0	8.9	
TOTAL KN	mg/l	30.7	8.6	13.4	14.0	
SOL. KN	mg/l	25.6	3.0	11.8	12.9	
NO_2-N	mg/l			0.83		
NO_3-N	mg/l			0.25		
TOTAL-P	mg/l P	9.7		8.1	10.7	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			18,000	7,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 4, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.336			0.084	0.348
PEAK	MGD	0.643			0.274	0.643
TOTAL	MGD	0.542			0.176	0.481
TEMP.	°C	27	24	23	22	
pH		7.3	7.6	6.9	7.0	
D.O.	mg/1	0.0	3.0	0.8	1.0	
ALKALINITY (as $CaCO_3$)	mg/1	167	103	148	136	
TOTAL BOD_5	mg/1	210	75	56	34	
SOL.BOD_5	mg/1	82	59	50	22	
TOTAL COD	mg/1	274	110	88	76	
SOL.COD	mg/1	95	78	66	57	
TOTAL SS	mg/1	103	72	16	8	
VOL. SS	mg/1	77	59	11	5	
TOTAL NH_3 (as NH_3-N)	mg/1	15.0	0.2	9.8	9.6	
SOL. NH_3 (as NH_3-N)	mg/1	14.0	0.0	8.7	7.4	
TOTAL KN	mg/1	25.5	8.8	12.7	13.7	
SOL. KN	mg/1	17.5	3.4	11.0	12.3	
NO_2-N	mg/1			0.02		
NO_3-N	mg/1			0.20		
TOTAL-P	mg/1 P	10.9		8.3	7.9	
CHLORINE RESIDUAL	mg/1				0.0	
FECAL COLIFORMS	#/100ml			550,000	20,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 5, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.214			0.129	0.255
PEAK	MGD	0.509			0.255	0.485
TOTAL	MGD	0.420			0.221	0.373
TEMP.	°C	27	25	25	24	
pH		7.2	7.4	7.0	6.9	
D.O.	mg/l	0.4	3.6	0.4	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	157	106	118	130	
TOTAL BOD_5	mg/l	148	65	54	30	
SOL.BOD_5	mg/l	74	42	39	19	
TOTAL COD	mg/l	194	80	99	67	
SOL.COD	mg/l	96	57	48	41	
TOTAL SS	mg/l	124	85	52	17	
VOL. SS	mg/l	112	64	41	11	
TOTAL NH_3 (as NH_3-N)	mg/l	12.5	0.0	3.0	7.9	
SOL. NH_3 (as NH_3-N)	mg/l	11.8	0.0	2.6	6.8	
TOTAL KN	mg/l	24.0	8.3	10.6	13.2	
SOL. KN	mg/l	17.5	2.7	6.5	13.0	
NO_2-N	mg/l			0.04		
NO_3-N	mg/l			0.5		
TOTAL-P	mg/l P	9.2		9.4	10.5	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			300,000	67,800	
ALGAE CELL CT.	#/ml		356,000	94,000	18,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 6, 1976 Wednesday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.239			0.094	0.215
PEAK	MGD	0.540			0.274	0.586
TOTAL	MGD	0.454			0.182	0.408
TEMP.	°C	27	27	26	27	
pH		7.3	7.5	7.1	6.9	
D.O.	mg/l	0.4	2.2	0.7	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	145	109	132	137	
TOTAL BOD_5	mg/l	160	80	60	30	
SOL.BOD_5	mg/l	68	43	39	21	
TOTAL COD	mg/l	180	91	91	62	
SOL.COD	mg/l	75	66	46	49	
TOTAL SS	mg/l	121	76	46	15	
VOL. SS	mg/l	91	59	35	11	
TOTAL NH_3 (as NH_3-N)	mg/l	8.8	4.7	0.3	13.9	
SOL. NH_3 (as NH_3-N)	mg/l	8.7	4.7	0.2	12.2	
TOTAL KN	mg/l	21.9	9.0	11.0	11.9	
SOL. KN	mg/l	16.6	7.1	7.7	11.4	
NO_2-N	mg/l			0.25		
NO_3-N	mg/l			0.7		
TOTAL-P	mg/l P	8.8		9.9	8.4	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			320,000	6,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: October 7, 1976 Thursday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.312			0.084	0.196
PEAK	MGD	0.542			0.212	0.586
TOTAL	MGD	0.478			0.152	0.439
TEMP.	°C	27	19	22	22	
pH		7.2	7.5	7.0	7.0	
D.O.	mg/l	0.1	1.2	0.6	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	164	110	152	140	
TOTAL BOD_5	mg/l	156	128	68	48	
SOL. BOD_5	mg/l	86	46	37	32	
TOTAL COD	mg/l	180	145	70	79	
SOL.COD	mg/l	98	65	47	63	
TOTAL SS	mg/l	108	76	16	23	
VOL. SS	mg/l	91	54	11	21	
TOTAL NH_3 (as NH_3-N)	mg/l	8.8	0.0	8.3	8.2	
SOL. NH_3 (as NH_3-N)	mg/l	8.4	0.0	7.9	8.1	
TOTAL KN	mg/l	24.0	8.2	13.3	12.9	
SOL. KN	mg/l	19.3	3.4	12.1	11.5	
NO_2-N	mg/l			0.4		
NO_3-N	mg/l			0.28		
TOTAL-P	mg/l P	9.2		8.6	9.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			810,000	65,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 2, 1976 Tuesday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.305			0.114	0.392
PEAK	MGD	0.802			0.274	0.831
TOTAL	MGD	0.744			0.213	0.693
TEMP.	^{o}C	20	21	21	20	
pH		7.2	7.4	7.1	7.4	
D.O.	mg/l	0.2	2.4	0.6	0.8	
ALKALINITY (as $CaCO_3$)	mg/l	140	108	142	145	
TOTAL BOD_5	mg/l	137	45	23	18	
SOL.BOD_5	mg/l	109	36	17	10	
TOTAL COD	mg/l	243	114	57	51	
SOL.COD	mg/l	132	57	47	47	
TOTAL SS	mg/l	106	32	10	68	
VOL. SS	mg/l	67	21	8	27	
TOTAL NH_3 (as NH_3-N)	mg/l	18.6	6.3	9.2	12.6	
SOL. NH_3 (as NH_3-N)	mg/l	16.2	6.2	8.6	12.4	
TOTAL KN	mg/l	22.4	9.1	12.4	14.3	
SOL. KN	mg/l	19.3	8.7	11.3	13.8	
NO_2-N	mg/l			0.04		
NO_3-N	mg/l			0.21		
TOTAL-P	mg/l P	7.9		9.3	12.9	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			130,000	87,000	
ALGAE CELL CT.	#/ml		312,000	120,000	93,000	

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 3, 1976 Wednesday

Parameter	Units	Sampling Point L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.295			0.084	0.348
PEAK	MGD	0.734			0.231	0.775
TOTAL	MGD	0.611			0.189	0.574
TEMP.	°C	16	15	15	17	
pH		7.0	7.3	6.8	7.1	
D.O.	mg/l	0.4	2.6	0.3	0.5	
ALKALINITY (as $CaCO_3$)	mg/l	161	119	142	132	
TOTAL BOD_5	mg/l	190	90	55	30	
SOL. BOD_5	mg/l	88	41	22	13	
TOTAL COD	mg/l	338	104	71	67	
SOL. COD	mg/l	158	69	44	34	
TOTAL SS	mg/l	162	39	18	29	
VOL. SS	mg/l	108	35	10	16	
TOTAL NH_3 (as NH_3-N)	mg/l	17.9	6.6	8.8	8.2	
SOL. NH_3 (as NH_3-N)	mg/l	15.8	6.4	8.6	7.9	
TOTAL KN	mg/l	23.1	9.3	10.3	9.7	
SOL. KN	mg/l	20.8	8.4	9.8	8.2	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.17		
TOTAL-P	mg/l P	9.5		10.0	10.9	
CHLORINE RESIDUAL	mg/l				0.3	
FECAL COLIFORMS	#/100ml			120,000	100,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 4, 1976 Thursday

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.331			0.094	0.392
PEAK	MGD	0.756			0.254	0.703
TOTAL	MGD	0.660			0.196	0.606
TEMP.	°C	20	21	21	21	
pH		7.3	7.4	6.8	6.9	
D.O.	mg/l	0.0	3.8	0.7	0.6	
ALKALINITY (as $CaCO_3$)	mg/l	176	125	148	142	
TOTAL BOD_5	mg/l	132	49	47	37	
SOL.BOD_5	mg/l	110	32	20	12	
TOTAL COD	mg/l	212	92	101	114	
SOL.COD	mg/l	92	54	66	54	
TOTAL SS	mg/l	114	46	11	12	
VOL. SS	mg/l	75	30	8	6	
TOTAL NH_3 (as NH_3-N)	mg/l	22.8	5.3	10.2	9.3	
SOL. NH_3 (as NH_3-N)	mg/l	19.6	4.9	9.6	8.8	
TOTAL KN	mg/l	28.7	7.2	13.5	12.3	
SOL. KN	mg/l	24.3	6.3	10.8	10.6	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	11.1		8.3	9.7	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			180,000	130,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 5, 1976 Friday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.335			0.129	0.393
PEAK	MGD	0.766			0.300	0.831
TOTAL	MGD	0.629			0.243	0.587
TEMP.	^{o}C	21	20	21	21	
pH		7.1	7.2	6.8	6.9	
D.O.	mg/l	0.2	2.4	0.8	1.3	
ALKALINITY (as $CaCO_3$)	mg/l	173	126	152	141	
TOTAL BOD_5	mg/l	221	102	61	34	
SOL.BOD_5	mg/l	161	75	45	26	
TOTAL COD	mg/l	353	151	75	66	
SOL.COD	mg/l	200	90	59	41	
TOTAL SS	mg/l	203	50	21	33	
VOL. SS	mg/l	151	34	12	15	
TOTAL NH_3 (as NH_3-N)	mg/l	18.4	7.8	9.2	8.4	
SOL. NH_3 (as NH_3-N)	mg/l	16.2	7.5	8.7	8.2	
TOTAL KN	mg/l	22.7	8.5	10.9	9.6	
SOL. KN	mg/l	18.0	7.9	10.4	9.2	
NO_2-N	mg/l			0.03		
NO_3-N	mg/l			0.14		
TOTAL-P	mg/l P	11.3		9.5	9.7	
CHLORINE RESIDUAL	mg/l				0.1	
FECAL COLIFORMS	#/100ml			150,000	88,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 6, 1976 Saturday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.287			0.114	0.256
PEAK	MGD	0.759			0.212	0.643
TOTAL	MGD	0.645			0.172	0.602
TEMP.	^{o}C	15	17	17	16	
pH		7.1	7.5	6.9	7.1	
D.O.	mg/l	0.3	0.6	0.8	0.4	
ALKALINITY (as $CaCO_3$)	mg/l	192	130	146	137	
TOTAL BOD_5	mg/l	230	76	41	21	
SOL.BOD_5	mg/l	103	40	30	16	
TOTAL COD	mg/l	402	84	87	84	
SOL.COD	mg/l	143	56	78	68	
TOTAL SS	mg/l	187	45	24	52	
VOL. SS	mg/l	128	9	12	32	
TOTAL NH_3 (as NH_3-N)	mg/l	21.0	5.6	10.0	9.2	
SOL. NH_3 (as NH_3-N)	mg/l	19.2	5.3	9.8	8.7	
TOTAL KN	mg/l	24.8	8.4	11.4	9.9	
SOL. KN	mg/l	18.8	8.0	10.5	9.8	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.24		
TOTAL-P	mg/l P	11.3		9.7	8.6	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			65,000	15,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 7, 1976 Sunday

Parameter	Units	Sampling Point				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.395			0.151	0.455
PEAK	MGD	0.827			0.255	0.702
TOTAL	MGD	0.731			0.227	0.678
TEMP.	°C	16	18	18	17	
pH		7.3	7.0	7.2	7.3	
D.O.	mg/l	0.6	1.8	1.2	0.9	
ALKALINITY (as $CaCO_3$)	mg/l	200	144	146	135	
TOTAL BOD_5	mg/l	260	86	71	35	
SOL. BOD_5	mg/l	128	37	36	25	
TOTAL COD	mg/l	361	121	143	177	
SOL. COD	mg/l	159	103	37	100	
TOTAL SS	mg/l	207	36	17	23	
VOL. SS	mg/l	152	31	13	14	
TOTAL NH_3 (as NH_3-N)	mg/l	22.3	11.0	10.3	8.7	
SOL. NH_3 (as NH_3-N)	mg/l	20.8	10.2	10.2	8.6	
TOTAL KN	mg/l	33.0	16.8	13.7	12.7	
SOL. KN	mg/l	26.9	12.5	11.8	10.8	
NO_2-N	mg/l			0.04		
NO_3-N	mg/l			0.24		
TOTAL-P	mg/l P	10.0		9.3	9.0	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			170,000	21,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

ORANGE GROVE LAGOON DATA: November 8, 1976 Monday

PARAMETER	UNITS	SAMPLING POINT				
		L1	L2	L3	L4	F4
FLOW*						
MIN	MGD	0.353			0.129	0.348
PEAK	MGD	0.782			0.274	0.703
TOTAL	MGD	0.621			0.208	0.572
TEMP.	^oC	16	17	17	17	
pH		6.9	7.4	6.7	6.9	
D.O.	mg/l	0.2	2.7	1.8	1.0	
ALKALINITY (as $CaCO_3$)	mg/l	171	150	152	153	
TOTAL BOD_5	mg/l	272	62	32	29	
SOL.BOD_5	mg/l	135	31	23	16	
TOTAL COD	mg/l	360	87	68	65	
SOL.COD	mg/l	175	53	50	50	
TOTAL SS	mg/l	215	32	72	37	
VOL. SS	mg/l	180	28	12	20	
TOTAL NH_3 (as NH_3-N)	mg/l	19.2	9.8	10.2	9.6	
SOL. NH_3 (as NH_3-N)	mg/l	15.3	8.5	8.8	7.5	
TOTAL KN	mg/l	29.6	12.8	12.9	11.3	
SOL. KN	mg/l	18.3	8.7	12.2	10.9	
NO_2-N	mg/l			0.05		
NO_3-N	mg/l			0.21		
TOTAL-P	mg/l P	10.9		9.3	9.4	
CHLORINE RESIDUAL	mg/l				0.0	
FECAL COLIFORMS	#/100ml			160,000	77,000	
ALGAE CELL CT.	#/ml					

*MGD X 3785 = m^3/d

APPENDIX B. AUXILIARY MONITORING INFORMATION FOR THE ORANGE GROVE LAGOON SYSTEM

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

DECEMBER 1975

Date	AIR TEMPERATURE °F			PRECIPITATION IN.	WIND		POWER USED (KWH)	
	MAX	MIN	AVG		VEL. (KNOTS)	DIR.°	CELL A1	CELL A2
19	45	26	36.5	None	2 Knots	01°	467	520
20	53	43	47.4	"	2 Knots	310	441	480
21	54	36	44.7	"	8 Knots	350	412	440
22	50	34	42.0	"	4 Knots	340	435	480
23	59	38	48.5	"	3 Knots	350	409	400
24	62	36	51.5	Trace	8 Knots	050	440	440
25	66	47	56.9	1.07	10 Knots - gusting to 20	140	452	520
26	51	46	48.0	None	8 Knots	260	440	520
27	53	41	48.1	"	Calm	-	414	400
28	70	44	58.6	0.15	5 Knots	030	434	480
29	63	58	60.0	1.09	14 Knots - gusting to 30	100	408	400
30	70	55	63.1	1.61	6 Knots	080	446	440
31	62	48	63.6	0.06	8 Knots - gusting to 15	290	421	440

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

JANUARY 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN.	W I N D VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	67	45	52.6	None	3 Knots	030	448	400
02	69	58	65.0	0.04	10 Knots	130	441	480
03	63	39	49.1	0.02	12 Knots	010	422	440
04	46	32	38.0	None	16 Knots	010	482	480
05	45	30	37.5	"	4 Knots	030	407	480
06	59	37	50.5	0.03	7 Knots	050	409	400
07	67	39	58.1	0.44	7 Knots	180	450	520
08	41	28	33.7	None	15 Knots	350	416	440
09	43	23	32.9	"	8 Knots	020	450	480
10	56	32	45.5	"	4 Knots	030	443	480
11	62	51	56.3	0.02	12 Knots	110	419	400
12	62	54	58.0	None	Calm	Calm	428	480
13	69	60	64.5	"	12 Knots	190	435	480
14	56	46	51.0	"	25 Knots	150	440	440
15	54	34	44.5	"	10 Knots	030	431	480
16	66	45	50.5	"	32 Knots	320	528	480
17	50	33	42.5	"	23 Knots	340	514	440
18	48	32	40.0	"	14 Knots	050	318	440
19	54	35	44.5	"	23 Knots	110	423	400
20	63	38	50.5	"	10 Knots	180	418	440
21	61	42	51.5	"	15 Knots	350	437	480
22	63	35	49.0	"	9 Knots	190	428	440
23	62	32	47.0	"	18 Knots	170	434	480
24	65	55	60.0	"	13 Knots	140	485	480
25	65	60	62.5	0.08	22 Knots	170	386	440
26	62	45	53.5	None	28 Knots	360	349	440
27	54	39	46.5	"	25 Knots	360	524	480
28	51	30	40.5	"	13 Knots	220	426	440
29	66	35	50.5	"	10 Knots	300	445	480
30	68	37	52.5	"	14 Knots	210	448	480
31	64	45	59.5	1.06	12 Knots	180	435	480

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

FEBRUARY 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN.	WIND VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	63	52	57.5	None	35 Knots	310		
02	57	35	46.0	"	20 Knots	220		
03	68	51	59.5	"	18 Knots	220		
04	69	58	63.5	"	12 Knots	130		
05	68	61	64.5	0.7	15 Knots	150		
06	43	55	55.0	0.2	25 Knots	360		
07	50	35	42.5	None	15 Knots	360		
08	57	32	44.5	"	15 Knots	200		
09	60	37	48.5	"	8 Knots	180		
10	67	44	55.5	"	15 Knots	190		
11	71	55	63.0	"	17 Knots	190		
12	73	58	65.5	"	12 Knots	180		
13	70	57	64.0	"	12 Knots	180		
14	70	50	67.5	"	10 Knots	170		
15	70	58	64.0	"	14 Knots	130	581	440
16	71	65	68.0	"	18 Knots	170	603	440
17	70	65	67.5	"	20 Knots	190	691	480
18	75	62	68.5	1.5	25 Knots	240	738	520
19	73	50	61.5	"	10 Knots	190	765	400
20	70	54	62.0	"	18 Knots	130	707	520
21	70	62	66.0	1.2	30 Knots	300	877	480
22	52	40	46.0	"	28 Knots	340		
23	60	36	45.0	"	14 Knots	200		
24	47	42	54.5	"	10 Knots	170		
25	68	44	56.0	"	12 Knots	130		
26	71	54	62.5	"	10 Knots	170		
27	76	51	63.5	"	10 Knots	190		
28	76	55	65.5	"	10 Knots	170		
29	70	51	60.5	"	10 Knots	140		

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

MARCH 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	W I N D VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	72	52	62.0	None	10 Knots	140		
02	74	66	70.0	"	8 Knots	130		
03	72	68	70.0	"	12 Knots	130		
04	72	67	69.5	"	15 Knots	130		
05	75	68	71.5	"	10 Knots	140		
06	75	54	64.5	"	12 Knots	020		
07	68	46	58.0	"	8 Knots	070		
08	68	47	57.5	0.90	12 Knots	180		
09	64	44	54.0	None	14 Knots	350		
10	62	41	51.5	"	12 Knots	180		
11	67	45	56.0	"	10 Knots	013		
12	72	64	67.5	"	10 Knots	016		
13	67	48	57.5	"	8 Knots	020	843	440
14	54	48	51.0	"	1 Knots	080	820	440
15	73	60	66.0	0.50	10 Knots	180	867	480
16	67	46	56.5	None	20 Knots	340	849	480
17	61	39	50.0	"	10 Knots	220	664	440
18	68	44	56.0	"	10 Knots	140	600	440
19	76	63	69.5	"	12 Knots	130	742	440
20	74	68	70.5	"	15 Knots	174		
21	73	59	66.0	"	8 Knots	350		
22	61	51	56.0	"	7 Knots	050		
23	66	48	57.0	"	10 Knots	170		
24	71	51	61.0	"	20 Knots	130		
25	68	62	65.0	2.70	17 Knots	160		
26	73	66	69.5	0.30	17 Knots	170		
27	79	68	73.5	2.50	15 Knots	360		
28	76	56	66.0	0.10	12 Knots	130		
29	70	51	60.5	None	18 Knots	140		
30	75	69	72.0	0.25	18 Knots	160		
31	66	50	58.0	"	18 Knots	340		

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

APRIL 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	WIND VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	71	44	77.5	None	12 Knots	190	279	400
02	76	49	63.5	"	8 Knots	180	314	440
03	76	56	66.0	"	8 Knots	180	311	520
04	75	54	64.5	"	12 Knots	220	283	440
05	77	60	68.5	0.20	8 Knots	180	252	440
06	80	61	70.5	None	12 Knots	360	303	480
07	75	57	66.0	"	7 Knots	190	305	440
08	80	62	71.0	"	10 Knots	360	326	480
09	78	57	67.5	"	10 Knots	360	327	560
10	74	51	63.5	"	6 Knots	170	269	440
11	75	55	65.0	"	12 Knots	190	297	440
12	88	62	75.0	"	9 Knots	220	300	480
13	78	65	72.5	"	10 Knots	200	312	440
14	76	63	69.5	"	10 Knots	180	377	440
15	77	63	70.0	"	11 Knots	140	937	480
16	78	71	74.5	"	13 Knots	120	902	400
17	79	72	75.5	"	20 Knots	130	1045	520
18	79	69	74.0	"	10 Knots	130	921	440
19	76	61	68.5	"	10 Knots	170	888	480
20	78	65	71.5	"	10 Knots	180	844	440
21	78	63	70.5	0.10	10 Knots	180	972	480
22	78	59	68.5	None	8 Knots	190	873	440
23	78	51	64.5	0.20	8 Knots	180	818	480
24	80	67	73.5	None	16 Knots	190	660	440
25	83	61	72.0	"	12 Knots	300	674	440
26	75	55	65.0	"	8 Knots	360	1048	480
27	73	50	61.5	"	10 Knots	180	748	480
28	78	58	68.0	"	10 Knots	130	751	400
29	79	63	71.0	1.50	8 Knots	120	753	480
30	72	77	74.5	0.03	15 Knots	190	737	440

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

MAY 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	W I N D VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	74	64	69.0	None	12 Knots	330		
02	76	60	68.0	"	8 Knots	360		
03	81	57	69.0	"	9 Knots	310		
04	73	56	65.5	"	5 Knots	150		
05	76	56	66.0	"	15 Knots	130		
06	79	73	76.0	0.1	18 Knots	180		
07	76	66	71.0	1.6	15 Knots	180		
08	76	56	66.5	None	13 Knots	040		
09	76	62	69.0	"	8 Knots	140		
10	72	64	68.0	0.4	30 Knots	170		
11	83	62	73.5	None	8 Knots	360		
12	80	67	74.5	0.1	15 Knots	180		
13	80	67	73.5	1.4	18 Knots	170		
14	74	69	71.5	1.2	7 Knots	230	729	440
15	76	67	71.5	None	13 Knots	240	723	520
16	81	71	76.0	"	10 Knots	200	643	440
17	83	67	75.0	"	8 Knots	290	723	480
18	77	59	68.0	"	50 Knots	350	754	440
19	73	55	64.0	"	10 Knots	180	734	480
20	79	59	69.0	"	10 Knots	130	742	480
21	74	64	69.0	0.4	14 Knots	080		
22	72	69	70.5	0.5	15 Knots	020		
23	86	66	76.0	None	30 Knots	360		
24	81	63	72.0	"	15 Knots	020		
25	82	71	76.5	"	7 Knots	360		
26	75	68	72.5	1.1	15 Knots	140		
27	75	67	71.0	2.4	12 Knots	110		
28	62	77	69.5	None	14 Knots	270		
29	80	66	73.0	"	15 Knots	180		
30	79	67	73.0	"	14 Knots	180		
31	83	74	78.5	"	20 Knots	190		

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

JUNE 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	W I N D VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	83	77	80.0	None	12 Knots	190		
02	88	70	79.0	0.1	13 Knots	220		
03	82	70	76.0	1.0	8 Knots	350		
04	83	70	76.5	0.8	15 Knots	150		
05	78	69	74.5	0.2	16 Knots	100		
06	79	68	73.5	None	8 Knots	070		
07	82	68	75.0	"	10 Knots	180		
08	83	65	74.0	"	8 Knots	180		
09	88	66	77.0	"	8 Knots	190		
10	87	69	78.0	"	8 Knots	190		
11	87	66	76.5	"	14 Knots	190	656	440
12	86	62	74.0	"	12 Knots	180	658	400
13	88	72	80.0	"	12 Knots	120	747	480
14	86	71	78.5	"	15 Knots	130	721	480
15	75	72	73.5	"	12 Knots	180	733	440
16	85	74	79.5	2.9	17 Knots	140	766	480
17	86	72	79.0	None	14 Knots	220	697	440
18	76	85	80.5	0.1	16 Knots	320		
19	75	85	80.0	1.6	18 Knots	340		
20	70	86	78.0	None	13 Knots	210		
21	64	84	74.0	"	12 Knots	180		
22	69	84	77.5	"	12 Knots	130		
23	77	86	81.5	"	15 Knots	140		
24	74	80	78.0	0.6	15 Knots			

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

JULY 1976

Date	AIR TEMPERATURE °F			PRECIPITATION	W I N D		POWER USED (KWH)	
	MAX	MIN	AVG	IN	VEL. (KNOTS)	DIR.°	CELL A1	CELL A2
01	86	70	78.0	None	8 Knots	300	462	320
02	87	70	78.5	1.80	25 Knots	320	596	480
03	87	75	81.0	0.50	10 Knots	190	609	440
04	90	80	85.0	None	11 Knots	210	584	480
05	79	69	74.0	"	12 Knots	320	496	440
06	80	71	75.5	"	8 Knots	230	699	480
07	83	72	77.5	"	10 Knots	180	693	440
08	86	73	79.5	"	12 Knots	190	533	560
09	88	73	80.5	"	8 Knots	220	545	640
10	88	72	80.0	"	8 Knots	180	610	560
11	90	78	84.0	"	8 Knots	190	579	640
12	88	74	81.0	"	15 Knots	320	614	600
13	89	73	81.0	"	12 Knots	300	693	600
14	90	73	81.5	"	7 Knots	310	668	600
15	88	73	80.5	"	12 Knots	190	566	600
16	96	72	84.0	2.10	8 Knots	310	549	720
17	82	74	78.0	0.85	12 Knots	300	604	520
18	89	72	80.5	None	0.8 Knots	190	544	520
19	88	72	80.0	1.40	7 Knots	170	616	560
20	87	72	79.5	None	10 Knots	160	626	640
21	89	73	81.0	"	8 Knots	190	600	560
22	90	75	82.5	"	9 Knots	190	608	480
23	89	76	82.5	0.60	10 Knots	200	624	520
24	90	75	82.5	None	10 Knots	180	570	480
25	90	75	82.5	"	12 Knots	180	595	440
26	91	76	83.5	"	10 Knots	180	583	320
27	90	79	84.5	"	12 Knots	190	633	360
28	90	78	84.0	0.10	10 Knots	190	547	360
29	87	78	84.0	None	10 Knots	190	578	360
30	90	77	82.5	"	12 Knots	220	584	480
31	93	76	84.5	"	10 Knots	240		

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

AUGUST 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	W I N D VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	92	75	83.5	0.1	6 Knots	340	475	440
02	91	72	82.5	None	8 Knots	350	465	400
03	90	73	81.5	"	12 Knots	030	466	440
04	85	74	79.5	"	10 Knots	170	484	360
05	88	75	31.5	"	12 Knots	170	510	440
06	88	77	86.5	0.3	8 Knots	200	469	400
07	96	77	87.0	None	6 Knots	290	305	400
08	96	78	87.0	"	8 Knots	350		
09	88	66	77.0	"	8 Knots	450		
10	86	66	76.0	"	8 Knots	190		
11	88	70	79.0	"	8 Knots	170		
12	89	73	80.2	"	8 Knots	190		
13	90	75	80.5	"	10 Knots	190		
14	90	75	80.5	"	10 Knots	180		
15	89	76	80.5	"	10 Knots	190		
16	93	76	81.1	0.1	11 Knots	220		

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

SEPTEMBER 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	WIND VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	86	74	80.0	None	8 Knots	130	690	200
02	88	75	81.5	"	10 Knots	190	828	320
03	88	73	80.5	0.3	10 Knots	170	963	320
04	86	73	79.5	0.1	6 Knots	060	542	400
05	84	73	78.5	None	6 Knots	050	741	440
06	87	70	78.5	"	10 Knots	030	746	320
07	81	72	77.5	0.7	8 Knots	060	696	320
08	87	73	80.0	None	6 Knots	170	716	320
09	87	72	79.5	"	10 Knots	190	746	320
10	81	71	76.0	"	22 Knots	360	746	360
11	83	60	72.5	"	5 Knots	060	408	000
12	83	65	74.0	"	12 Knots	100	637	000
13	86	71	78.5	"	14 Knots	140	723	000
14	86	66	74.0	"	10 Knots	010	716	000
15	88	64	76.0	"	8 Knots	360	719	000
16	89	63	76.0	"	10 Knots	360	749	000
17	85	66	75.5	"	8 Knots	170	749	80
18	86	68	77.0	"	6 Knots	200	316	200
19	86	70	78.0	"	8 Knots	260	640	120
20	87	70	78.5	"	7 Knots	210	726	000
21	83	71	77.0	"	8 Knots	310	714	000
22	83	68	75.5	"	8 Knots	190	720	000
23	84	65	74.5	"	8 Knots	090	710	000
24	81	75	78.0	"	12 Knots	130	767	000
25	85	73	79.0	1.1	15 Knots	130	720	000
26	81	73	77.0	None	18 Knots	180	137	200
27	84	74	79.0	"	15 Knots	200	612	000
28	81	70	75.5	"	8 Knots	150	578	000
29	82	72	77.0	"	12 Knots	320	603	000
30	79	60	68.5	"	14 Knots	340	613	000

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

OCTOBER 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	WIND VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	80	72	76.0	None	8 Knots	340	602	0.0
02	83	61	72.0	"	10 Knots	360	616	0.0
03	84	70	77.0	"	10 Knots	200	577	0.0
04	83	66	74.5	"	8 Knots	130	595	0.0
05	82	76	79.0	0.5	14 Knots	150	595	0.0
06	72	69	70.5	None	11 Knots	350	598	40.0
07	72	60	65.5	"	6 Knots	360	591	0.0
08	64	56	60.0	"	15 Knots	350		
09	71	48	59.5	"	15 Knots	360		
10	73	55	64.0	"	10 Knots	170		
11	73	55	64.0	"	12 Knots	170		
12	74	56	65.0	"	14 Knots	130		
13	75	54	64.5	"	8 Knots	190		
14	81	55	68.0	"	10 Knots	020		
15	78	56	67.0	1.3	10 Knots	180		
16	71	61	66.0	None	8 Knots	060		
17	69	56	62.5	"	20 Knots	035		
18	70	47	68.5	"	10 Knots	360		
19	75	58	66.5	"	17 Knots	130		
20	64	54	59.0	"	20 Knots	340		
21	66	39	52.5	"	10 Knots	360		
22	72	45	58.5	"	8 Knots	150		
23	74	53	63.5	"	10 Knots	130		
24	75	62	68.5	"	9 Knots	170		
25	73	69	71.0	"	12 Knots	220		
26	68	56	62.0	"	12 Knots	340		
27	60	45	52.5	"	10 Knots	360		
28	68	58	62.0	"	12 Knots	320		
29	66	63	64.5	1.5	23 Knots	120		
30	73	68	70.5	None	15 Knots	300		
31	65	47	56.0	"	17 Knots	360		

WEATHER - POWER CONSUMPTION DATA

ORANGE GROVE LAGOON SYSTEM

NOVEMBER 1976

Date	AIR TEMPERATURE °F MAX	MIN	AVG	PRECIPITATION IN	W I N D VEL. (KNOTS)	DIR.°	POWER USED (KWH) CELL A1	CELL A2
01	66	41	53.5	None	10 Knots	360		
02	68	44	56.0	"	9 Knots	320	495	0.0
03	69	43	56.0	"	7 Knots	350	557	0.0
04	66	45	54.5	"	8 Knots	340	311	0.0
05	61	40	50.5	"	8 Knots	330	306	0.0
06	62	39	50.5	"	9 Knots	160	248	0.0
07	75	41	58.0	"	12 Knots	330	507	0.0
08	65	38	52.5	"	10 Knots	030	558	0.0
09	63	35	49.0	"	8 Knots	170		
10	67	50	58.5	"	10 Knots	019		
11	70	59	64.5	"	8 Knots	170		
12	55	45	50.0	"	12 Knots	010		
13	56	37	43.5	"	10 Knots	020		
14	49	45	47.0	"	10 Knots	360		
15	53	46	49.5	"	8 Knots	340		